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Report to the Chairman, Committee on
Labor and Human Resources, U.S. Senate

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HOMELESS MENTALLY ILL

Problems and Options in Estimating Numbers and Trends

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General Accounting Office
Washington, D.C. 20548

Program Evaluation and
Methodology Division

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The Honorable Edward M. Kennedy
Chairman, Committee on Labor and
Human Resources
United States Senate

Dear Mr. Chairman:

In response to your May 6, 1987, letter, we are submitting this report on homelessness in the United States. At the committee's request, we examined the methodological soundness of current population estimates of the number of homeless chronically mentally ill persons, and we proposed several options for estimating the size of this vulnerable population.

As we arranged with your office, unless you publicly announce the contents of this report earlier, we plan no further distribution of it until 30 days from the date of the report. At that time, we will send copies to the Department of Health and Human Services and make copies available to others upon request. Please call me on 202-275-1854 or Lois-ellin Datta (202-275-1370) if you need further information.

Sincerely yours,

Eleanor Chelimsky
Director

Executive Summary

Purpose

The plight of homeless men, women, and children is widely seen as a serious national problem. Estimates of the number of homeless persons in the United States range from 250,000 to 3 million. Estimates of the proportion of homeless persons who are chronically mentally ill vary from 10 to 47 percent, a range that makes it difficult to allocate resources. At the request of the Chairman of the Senate Labor and Human Resources Committee, GAO examined the soundness of current estimates of the number of homeless chronically mentally ill persons in the United States and developed strategies for arriving at sound estimates of populations and of trends.

Background

In recent years, growing numbers of persons have been sleeping in publicly and privately supported temporary shelters, in the streets, and in other places not intended for human habitation. How large this number is, whether and how rapidly it is growing, and the size of different subgroups, such as homeless women and children and homeless mentally ill persons, are matters of considerable dispute. Many believe that chronically mentally ill persons represent a substantial proportion of the homeless and the group that may be the most difficult to serve.

To examine the soundness of current information, GAO reviewed estimates of the number of homeless persons that were published between 1975 and 1987 and that presented at least some information about the estimation methods. Of 27 such reports, 3 were national, 4 were state, and 20 were local. Nine of the 27 had information on mental illness among homeless persons.

To determine whether better methods were available, GAO conducted technical reviews of prior estimates; carried out case studies in Los Angeles, Norfolk, and Boston, examining how estimates were made by those responsible for service delivery and evaluation in communities; and met with experts in counting hidden populations and serving the homeless.

Results in Brief

There are no sound national estimates of the number of homeless persons who are chronically mentally ill or of trends over time. There are, however, local estimates that give relatively sound numbers on both homeless persons and those who are chronically mentally ill. These estimates, while they cannot be generalized to the nation, use methods that could be applied on a larger scale. (See page 16.)

In general, studies based on actual counts received higher ratings of technical adequacy than did those based on expert knowledge. In particular, of 10 studies that GAO rated as technically sound, 9 were survey- or census-based and 1 was based on records about the use of services. To determine if methodological differences had important consequences on estimates of the number of homeless persons, GAO computed rates from data in these reports. The rates of homelessness ranged between 6 and 95 per 10,000 in the communities studied. Rates of homelessness were affected by the type of method used and the technical quality of a study. When only the counts of the homeless judged to be of high quality methodologically were analyzed, the range of estimates decreased by nearly half. (See pages 30-31.)

Estimates of the prevalence of mental illness among the homeless were affected by method choice. The proportions of homeless persons who were identified as mentally ill were between one fifth and one third when judgments of service providers were used to determine mental illness. When standardized instruments were applied, these rates ranged from one sixth to nearly half. (See pages 38-39.)

GAO identified several options for obtaining better assessments. For example, information useful for general planning could be derived relatively inexpensively from combining improved administrative data with some specialized studies. Fine-grained resource allocation would require a survey approach, which GAO has summarized. GAO has also developed general guidelines with regard to definitions, sampling, measures, and implementation that could improve the technical quality of the information. (See pages 43-44.)

Principal Findings

The three national estimates had methodological flaws. Only one national estimate included an assessment of mental illness. GAO identified 24 regional or local estimates, 9 of which also reported on mental illness. While many of these had problems likely to be associated with a high degree of uncertainty or bias, 10 reports yielded sound estimates. However, these could not be generalized to the nation. (See page 16.)

GAO examined the technical quality of 27 estimates based upon expert judgment, administrative records or data on use, and surveys or censuses. Only 10 studies were technically sound and 9 of these were survey or census based; one was utilization based. The remaining studies contained biases that would lead to underestimates or overestimates. (See pages 16-17.)

Most of the studies presented their information in terms of absolute numbers for counts of homeless persons. But the studies' structures did not permit separating differences in numbers resulting from city size from differences resulting from varying concentrations of homeless persons (for whatever reasons) or resulting from methodological choices. Using rates of homelessness per 10,000 persons from census data for the areas studied, GAO computed rates of homelessness ranging between 6 and 95 per 10,000. (See pages 29-30.)

Rates were related to the quality of the methodology. For stronger methods, the median rate of homelessness was lower—13 per 10,000—than when less-sound methods were used—22 per 10,000. Variability in rates of homelessness was also related to the quality of the methods. When only the high-quality studies were considered, the range of estimates fell to between 6 and 50 per 10,000; estimates from lower-quality studies ranged between 7 and 95 per 10,000. (See pages 30-31.)

Across the 9 studies assessing mental illness, there was little consensus on the percentage of the homeless who are chronically mentally ill. Its prevalence ranged from 10 to 47 percent. This range of estimates was partly caused by methodological variation in the way mental illness was measured. All measures used in these studies contained flaws that could bias estimates. (See pages 32-33.)

Counting homeless mentally ill persons is never likely to be entirely precise. People disagree on the definition of homelessness, and homelessness itself can be responsible for behavior and appearance that suggest mental illness. However, some improvements could be obtained from inexpensive changes such as common and clear definitions of homelessness. For planning and service improvement purposes, the collection of consistent information through administrative data bases could be coupled with smaller-scale studies. These relatively low cost studies would provide data permitting statistical adjustments such as the street-to-shelter ratio. For resource allocation or national decision purposes, GAO has described a more precise, but much more costly, approach involving a national sample of cities and seasonally adjusted counts. (See pages 44-46.)

Recommendations to the Secretary of Health and Human Services

GAO recommends that the secretary reexamine the requirements for the states' data collection and evaluation in the Stewart B. McKinney Homeless Assistance Act of 1987 (Public Law 100-77) and direct that the approaches outlined by GAO be incorporated when administrative data bases are established and when regulations specifying data to be collected by grantees are prepared. GAO further recommends that the secretary take steps to ensure that efforts continue to better define and validly measure mental illness among homeless persons, including an assessment of whether further research support is needed.

Matters for Consideration by the Congress

Continued effort to better define and validly measure mental illness among homeless persons is needed. The option GAO developed for deriving precise national estimates of the number of homeless chronically mentally ill persons (option 1) would require successful completion of such measurement research. However, GAO believes there is reason to require the incorporation of improvements in data collection outlined in this report (options 2 and 3). This includes the specification of the area of coverage, attention to seasonality, and a consistent definition of homelessness, in a coordinated data system under the McKinney Act.

Agency Comments

The departments of Health and Human Services (HHS), Commerce, and Housing and Urban Development (HUD) were asked to comment on a draft of this report. HHS concurred, in principle, with GAO's recommendations about reviewing measurement issues. However, HHS raised several practical considerations and questioned the feasibility of implementing two of GAO's options for counting homeless persons. With regard to a statistical reporting system (options 2 and 3), HHS noted that the McKinney Act does not explicitly require such a system, there is insufficient time to develop and implement it, local and state resources are limited, and it would miss homeless persons receiving nonfederal services. While acknowledging that such development is not required, GAO believes that plans should be prepared for a statistical reporting system as soon as possible. Further, GAO continues to believe that several states have adequate human and fiscal resources. GAO agrees that the legislation does not provide additional funding for statistical systems and may place a burden on recipients of federal funds. Finally, the rationale for option 3 (an augmented statistical system) is to address, in part, the possibility that some homeless persons would not be counted.

Commerce and HUD also provided more detailed technical comments. All comments and GAO's responses are presented in appendixes X-XII.

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Abbreviations

CES-D	Center for Epidemiologic Studies Depression Scale
DIS	Diagnostic Interview Schedule
DSM	Diagnostic and Statistical Manual
FACTS	Form for Assessment of Client Treatment Services
GAO	U.S. General Accounting Office
GAS	Global Assessment Scale
HHS	U.S. Department of Health and Human Services
HUD	U.S. Department of Housing and Urban Development
NIMH	National Institute of Mental Health
PERI	Psychiatric Epidemiologic Research Interview

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Chapter 1

Introduction

In recent years, human service providers, policymakers, and the public have agreed that chronic mental illness among homeless persons is a widespread problem. There has been, however, considerably less agreement—indeed, even somewhat heated argument—on the magnitude of the problem and whether it is changing.

At the request of the Chairman of the Senate Labor and Human Resources Committee, we examined two questions. How sound are current estimates of the number of homeless chronically mentally ill persons in the United States? What are the best available methods for arriving at a good estimate of this population and trends over time?

Background

Homelessness in the United States seems always to have existed to some degree, and there have been periods when very large numbers of citizens have been without shelter. Indeed, during the Great Depression, about one third of the nation was considered to be ill clad, ill housed, or ill nourished. The plight of thousands of homeless young men and women and of families during this period has been movingly chronicled in books such as Grapes of Wrath and has been studied by researchers such as Crouse (1986).

For many years after the Depression, homelessness was not seen as a major problem, although large cities had their Skid Rows, and some degree of homelessness existed in rural areas, particularly in the Appalachian region. However, as we have previously reported (U.S. General Accounting Office, 1985), growing numbers of persons have in recent years been sleeping at night in publicly and privately supported temporary shelters, in the streets, and in other places not intended for human habitation.[1] Accompanying the increase in the numbers of homeless persons, the composition of this population has changed. The homeless population is no longer made up primarily of older single men. In recent years, women, families, children and youths, and the mentally ill have joined the ranks of homeless persons.

Estimates of the number of homeless persons in the United States range from 250,000 (U.S. Department of Housing and Urban Development,

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[1] The term "shelter" as used in this analysis includes emergency shelters for homeless persons and settings where homeless persons might temporarily reside, such as detoxification centers and transitional living facilities.

1984) to 3 million (Hombs and Snyder, 1983).[2] Estimates of the proportion of homeless persons that are chronically mentally ill range from 10 to 47 percent. Based on this range of estimates, there could be as few as 25,000 or as many as 1.4 million homeless mentally ill persons nationally. Such a range of estimates makes resource allocation, service planning, and evaluation difficult at all levels.

These difficulties are illustrated in part by disputes about the need for and the types of service required. Those concerned with mental illness stress the highest estimates of mentally ill persons and, thus, the importance of generous funding for ancillary mental health services. Those concerned with children and families emphasize the highest estimates for these subgroups of homeless persons and, thus, the need to allocate more resources for the quite distinct services these subgroups would require. Both join forces, again using the highest estimates, in support of long-term, ever larger allocations to meet a growing need, while those who must actually provide the services from limited resources stress the lower estimates.

Lacking some way of reducing uncertainties about the numbers, there is a risk of either overestimating or underestimating need by hundreds of thousands of persons. Not surprisingly, recent legislation on behalf of homeless persons—namely, the Stewart B. McKinney Homeless Assistance Act (Public Law 100-77)—not only expanded services across the range of subgroups but also called for better counts of the numbers of homeless individuals and families.

Objective, Scope, and Methodology

Objective

Our objective was to answer the two questions we were asked. That is, we set out to

1. determine the soundness of current estimates of the homeless mentally ill. Are there any good numbers available?

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[2] The highest estimate used in our analysis was 2.2 million homeless persons (Hombs and Snyder, 1983). We used this estimate instead of the 3 million figure offered by the same authors, because the 2.2 million figure satisfied our inclusion criteria—it could be linked to a methodology (in this case, a survey of experts). The 3 million figure represented a forecast for 1983 for which no methodology was described.

2. identify the best available methods for getting sound estimates of the current population, if sound numbers do not exist.

The answer to the first question rests on answers to two other questions: How sound are current estimates of the general homeless population? How sound are current estimates of the proportion of homeless who are chronically mentally ill? In conducting our reviews of prior estimates, we addressed each of these questions separately.

Scope

In this effort, we focused only on the estimates of homeless persons and homeless mentally ill persons. We did not examine the soundness of estimates of other subgroups such as children and youths. We did not look at the soundness of information collected for more fine-grained analyses of the nature or causes of the problem. For example, we did not assess individual case histories of persons living in the Skid Row area of a city, since these were not intended to, and could not, yield an estimate of population size.

Methodology

Our study plan is presented in detail in appendix I. Table 1.1 shows the three methods we used—literature analysis, case studies, and expert views—to answer the two main questions. To answer the first question and the two subquestions it was based on, we used literature analysis and expert views. With regard to the literature analysis of estimates of the general homeless population—that is, the first of the two basic questions—we examined both the body of studies that have provided estimates and current critiques of those studies. We included studies at national, state, county, and local levels published from 1975 through 1987. We identified 17 studies through searches of 9 data bases such as PSYCHINFO and Mental Health Abstracts and a university research center file on homelessness. To ensure that our list was as comprehensive as possible, we asked approximately 50 experts on homelessness to identify studies that had been left out of our list and to refer us to other knowledgeable persons. (See appendix II for a list of these experts.) To see if there were additional, possibly unpublished, counts that were relevant, we called the mayors' offices in selected cities where there was a high probability that a count had been conducted. Our experts' reviews and our telephone contacts with major cities produced an additional 20 studies. Finally, we searched the bibliographies of reports and articles on homelessness. Through these efforts, we identified an additional 46 studies for a total of 83 studies. Our search was completed in August 1987; our analyses do not include studies prepared after that date.

Table 1.1: Methods We Used to Answer the Questions We Were Asked

Study question	Literature analysis	Case studies	Expert views
How sound are current estimates?	•		•
Are methods for improving the estimates available?	•	•	•

We then reviewed the 83 studies to select those useful for our purposes. We included all studies that (1) were in written form, (2) provided a count or estimate of the number of homeless or homeless mentally ill persons for a designated geographic area, and (3) presented some description of the method used to make the count or estimate. This screen excluded 56 studies, leaving us with 27 usable reports. A full list of all 83 studies is provided in our bibliography.

Finally, we reviewed the technical quality of each of the 27 studies on two dimensions: (1) technical adequacy and (2) soundness (that is, the extent to which the study methodology was likely to under- or overestimate the number of homeless persons). Our criteria for technical quality (which are presented in detail in appendix I) focused on four elements: the sampling design, the way in which homelessness and mental illness were assessed, how the study plan was carried out, and how the data were analyzed. For example, we looked at whether a study covered the range of places where homeless persons are likely to be found or only one setting, such as shelters.[3] We reviewed how interviewers were trained and how data were collected. We determined whether a study clearly differentiated and used methods appropriate to counting homeless persons at one point in time (such as 1 night) in contrast to counting how many persons might be homeless at least 1 night over a longer period of time, such as a year. And we examined whether the statistical adjustments made to the counts were appropriate.

For ratings of technical quality, the dimension given the most consideration in our ratings was the adequacy of the studies' sampling designs. The second most important dimension was measurement—specifically, whether the study represented an actual count of the number of homeless persons. The quality of a study's survey and data analysis procedures, while important, received less weight in our rating process.

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[3] We recognize that some studies did not intend to be as inclusive as our criteria, and in many cases, the study authors were quite specific about the limited scope and limited ability to generalize from their findings. However, since the results of studies have been used without regard for these limitations, we believe it is appropriate to indicate for each study whether its methods are likely to overestimate or underestimate the number of homeless and homeless mentally ill persons.

Applying our evaluation criteria in this manner, we rated each study's technical quality as very high, high, moderate, low, or very low.

Once we established a level of technical quality for each study, our second rating helped us distinguish where studies could be considered sound enough to provide reliable estimates on the technical quality scale (very high to very low). The soundness of studies was determined by rating each study on the extent to which its methodology would produce, in our judgment, an underestimate or an overestimate of the number of homeless persons or homeless mentally ill in the population. Each study was assigned a bias rating on a 7-point scale that ranged from −3 (serious underestimate) to +3 (serious overestimate). To determine a cutoff point for methodological soundness, we selected the studies that received a bias rating of −1, 0, or +1. In addition to providing a cutoff point, this second rating indicates the direction and likely magnitude of bias in each study.

Our methodology for answering the question on the adequacy of methods to identify the mentally ill was to compare the measures used in the studies on a number of criteria such as reliability, validity, and the extent to which a measure distinguished mentally ill persons from others simply exhibiting the debilitating effects of life on the streets. These criteria are outlined in appendix I.

To answer the committee's second main question—whether better methods are available to estimate the size of the homeless mentally ill populations—we used all three methods. First, while reviewing the available studies, we noted the elements that seemed particularly strong and had shown "real world" feasibility. Then we analyzed the methodological features that resulted in differences in the counts and their direction.

Second, we undertook in-depth case studies of three communities (Los Angeles, Norfolk, and Boston) to understand better how they were assessing the numbers of homeless and homeless mentally ill persons. We also obtained the views of local evaluators and service providers, such as shelter operators, on the strengths and weaknesses of different methodologies. We selected the three communities in order to bracket the range of intensity of service-delivery efforts; that is, we anticipated that evaluation might be most developed in communities already providing high levels of service to homeless persons and least developed where services were less intensive. By studying this range, we could avoid "over-designing" a study that might be difficult to carry out in communities with fewer resources and less experience while capitalizing on the knowledge gained in more experienced communities. (Details of our site selection approach are given in appendix I. The results are summarized in appendix IX.)

Third, we asked a panel of experts to discuss methodological issues with us, both to determine if better methods were available and to comment on the approaches we identified as most promising. (Our panelists are listed in appendix III.)

The Strengths and Limitations of Our Methods

The strengths of our study methods include combining three useful sources of information on the soundness of current estimates and the possibilities for improved counts. Considering the more theoretical and statistical concerns identified in the review of current studies, together with the experiences of practitioners that we learned about through the case studies, gives greater assurance that we have not overlooked important factors.

The weakness of our study method is primarily that we ourselves have not pilot-tested the approaches we see as leading to improvements in the estimates. Hands-on testing might uncover some problems or, of course, reveal additional strengths. We also note that although we have made every effort to identify all relevant studies, research is emerging rapidly and there may still be some gaps.

Report Organization

In chapter 2, we answer the question, How sound are the current estimates of the general homeless population? We present the results of our analyses of available studies. In chapter 3, we evaluate the soundness of estimates of the number of homeless persons who are chronically mentally ill. In chapter 4, we discuss the strategies we believe are particularly promising, completing our answer to the question, Are better methods available? And then we present our recommendations and agency comments.

Chapter 2

How Sound Are Current Estimates of the Number of Homeless Persons?

The answer to our first question—How sound are current estimates of the number of homeless mentally ill persons?—rests on answers to two other questions: How sound are current estimates of the general homeless population? and How sound are current estimates of the proportion of homeless persons who are chronically mentally ill? This chapter answers the first of these two questions. Our answer is that we found no sound national estimates of the homeless population. The national studies were weak technically. Studies that we rated higher in quality were local and therefore their findings could not be generalized to the nation as a whole. We did find, however, some aspects of how these studies were conducted that allowed us to start building a framework for better estimates.

How Sound Are Current Estimates?

The results of our assessment of technical quality are in table 2.1. The majority of our 27 studies, or 17, were rated moderate, low, or very low on technical quality; 10 studies were rated high in quality by our criteria. None of the studies were rated very high. Further, all high-quality estimates were local or regional rather than national. That is, by our criteria, no technically sound national estimates were available.

Table 2.1: Distribution of Our Technical Ratings of 27 Studies

Method	Very high	High	Moderate	Low	Very Low
Survey or census	•	9	4	2	1
Utilization study	•	1	3	•	•
Expert view	•	•	•	4	3
Total	**0**	**10**	**7**	**6**	**4**

Looking more closely at the methodology underlying these estimates, we find that studies can be classified into roughly three types: those that used expert judgment as the basis for the estimate (7 studies); those that relied on administrative records or records about the utilization of services (4 studies), and those based on surveys or censuses (16 studies). Table 2.1 shows that while the technical quality of studies varied in each category, 9 of the 10 high-quality studies were based on surveys or census and 1 was based on utilization data. Studies based on expert judgment received lower ratings on technical quality.

With regard to our rating of soundness, as seen in table 2.2, all the studies based on expert judgment contained flaws that would produce biased estimates of the general homeless population moderately (plus or minus 2) or seriously (plus or minus 3). Only 1 of 4 use-based studies met our soundness criteria. However, 9 of 17 surveys of census-based studies were rated sound. None of the studies were free of bias. Nine of 10 high-quality studies—those based on actual counts—contained biases that would tend to underestimate—to a small degree—the number of homeless persons.

Table 2.2: Distribution of Bias Ratings for 27 Studies

	Underestimate				Overestimate		
Method	**-3**	**-2**	**-1**	**0**	**+1**	**+2**	**+3**
Survey or census	•	5	8	•	1	2	•
Utilization study	•	1	1	•	•	2	•
Expert view	1	•	•	•	•	5	1
Total	**1**	**6**	**9**	**0**	**1**	**9**	**1**

We examined each study in some detail (see appendix IV). We discuss next some specific features that influenced our rating of quality. We have organized our discussion around the three methods used to obtain estimates of the number of homeless persons in a specific geographic area or region. Table 2.3 shows which studies used each method for three geographic regions—local, state, national.

Table 2.3: 27 Studies by Method and Geographic Unit of Analysis

Expert view (n = 7)			Utilization study (n = 4)			Census or survey (n = 16)		
National	**State**	**County, metro, local**	**National**	**State**	**County, metro, local**	**National**	**State**	**County, metro, local**
Hombs and Snyder (1983); HUD (1984)	California Dept. of Housing and Community Development (1985)	Adult Residential Care Advocates (1984); Cleghorn (1983); Lundy and Kalob (1985); Winograd (1983)		Health and Welfare Council of Central Maryland (1986); New York State Dept. of Social Services (1984)	Cowan et al. (1986); Gist and Welch (1986)	Freeman and Hall (1987)	LaGory et al. (1986)	Baumann et al. (1985); Brown et al. (1983); City of Boston (1986); City of Boston Emergency Shelter Commission (1983); Darcy and Jones (1975); Goplerud (1986); Hamilton, Rabinovitz, and Alschuler (1986); Homeless Task Force (1984); Luke (1986); Mental Health Association of Greenville County (1986); Robinson (1985); Rossi et al. (1986); Wiegand (1985); Woods and Burdell (1987)

Estimates Based Upon Expert Judgments

Numerous studies have used expert judgment as the core source of data in developing an estimate of the number of homeless persons. Seven such studies were in our sample. Two of the most widely known studies that employed this approach are national estimates developed by the U.S. Department of Housing and Urban Development (HUD) (1984) and Hombs and Snyder (1983). In addition, 1 state estimate (California Department of Housing and Community Development, 1985) and 4 local estimates (Adult Residential Care Advocates, 1984; Cleghorn, 1983; Lundy and Kalob, 1985; and Winograd, 1983) relied on expert judgments. Our major concerns were sampling method, measurement, and how the estimates were derived.

Sampling Method

A major concern in using experts to estimate the number of homeless persons is the extent to which the sample of knowledge-holders represents the different perspectives or sources of knowledge on homeless persons. For this method, a good sample of experts should be pluralistic—including shelter providers, police, case managers, ministers, social workers, even homeless persons themselves. Three of our expert estimate studies (Cleghorn, 1983; HUD, 1984; Winograd, 1983) reported efforts to obtain a wide range of experts. For example, in the Pittsburgh study (Winograd, 1983), a variety of persons considered most likely to come in contact with the homeless (police, emergency medical service personnel, mental health workers, social services department personnel) were asked to estimate the number of people potentially in need of shelter.

A second major sampling concern in using expert judgments is that settings for which judgments are being made should adequately represent the region under study (city, state, or nation). The HUD study represents the most sophisticated sampling design of the expert judgment studies. In HUD surveys of experts (shelter operators) and other knowledgeable persons, a stratified random sample of 60 metropolitan areas was selected. However, the HUD sampling design did not include rural areas and the sample of shelters excluded other service settings where the homeless might temporarily reside (such as jails and detoxification centers).[1] For the remaining studies using expert judgments, it was not clear how well the areas under study were represented.

Overall, the technical adequacy of the sampling designs for key informant studies was mixed. Three studies (Cleghorn, 1983; HUD, 1984; Winograd, 1983) documented attempts to select a broad base of informants and 4 studies (Adult Residential Care Advocates, 1984; Hombs and Snyder, 1983; Lundy and Kalob, 1985; and California Department of Housing and Community Development, 1985) were either less clear about the mix of informants surveyed or focused on service providers.

Measurement

Another major weakness in expert estimate studies of the homeless is subjectivity. Subjective estimates of any phenomenon are susceptible to at least two sources of bias. First, experts might have vested interests in overestimating or underestimating the size of the population, especially if funding or accountability is involved. Second, some experts, such as persons on the front line of service delivery to the homeless, are likely to overestimate the magnitude of the problem, since demand is likely to exceed supply for "free" resources.

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[1] HUD addressed the issue of rural homelessness in its estimation procedure. Specifically, rates of homelessness for small metropolitan areas were applied to small towns and rural areas.

A second weakness is that informants may not be clear on what geographic area they are assessing or rating. If, for example, informants are asked to estimate the number of homeless persons in a city and the term "city" is not explicitly defined, estimates might be made for the metropolitan area, the downtown area, or the region bounded by the city limits. An instance of this ambiguity was found in the HUD study.

Deriving the Estimate

Perhaps the weakest link in many expert judgment studies—especially the HUD study—involves the procedures used to compute estimates of the number of homeless (see appendix IV for a description of the HUD procedures). Two critiques (Appelbaum, 1987; Parsons, 1986) have identified a number of problems in HUD's computations. First, the population base used to derive a homelessness rate was not "city" (the unit of analysis for which respondents apparently were asked to provide estimates) but Rand McNally area, large geographic units covering central cities, suburbs, and counties. For example, the Los Angeles Rand McNally area included 10.6 million people living in 88 cities in 5 counties. If an estimate of the number of homeless persons was for a city and Rand McNally area population was used to compute a rate of homelessness, the rate of homelessness for that metropolitan area would be artificially low.

Second, it is unclear how the weights for estimates within cities were derived. Seemingly different methods received similar weights. Without knowing how these weights were established or their validity, it is unclear how much faith should be ascribed to the weighted average. This point is especially important when the variability of estimates within a city is considered. For example, for Baltimore, estimates by shelter providers ranged from 10,500 to 20,000; for Chicago, from 2,000 to 20,000; and for Los Angeles, from 25,000 to 40,000. The lack of consensus among experts—and, more importantly, the lack of evidence on how these values were derived—reduces the credibility of these estimates.

A particular criticism of the HUD study concerns the manner in which it estimated the street population. HUD estimated the street population in two ways: computing an average shelter-to-street ratio based on data from three cities and extrapolating from the "casual count" conducted by the Bureau of the Census in 1980. The first method is problematic because it assumes that the ratio of sheltered homeless to street homeless persons is constant across cities. As we show later in this chapter, this assumption is not supported by available evidence; street-to-shelter ratios vary substantially over time within the same city and across cities. Also the street count used in Phoenix was incorrect. The number 1,813, used by HUD, actually represented both sheltered and nonsheltered persons in Phoenix.[2] The second method (the Bureau of the Census "casual count") underestimated the number of street persons (Goldstein, Smith, and Taeuber, 1987) because methods for identifying homeless persons on the streets excluded persons who reported having an address elsewhere outside the city.[3]

Estimates Based Upon Utilization Data

As table 2.3 shows, four of the studies we reviewed relied primarily on routinely collected data on persons who come in contact with human service agencies (mostly emergency shelters) to estimate the number of homeless. In general, these estimates represent a partial count of homeless persons—that is, they count only those who come in contact with the human service system—and such estimates may be based on duplicated counts of the same person. The key methodological issues with this category of studies are sampling, implementation, and deriving the estimate.

Sampling

The sampling strategy used in most of the utilization-based studies involved surveys of shelters. Studies included different mixtures of public and private emergency shelters, institutions, and transitional-living facilities. For example, Gist and Welch (1986) collected utilization data from nine emergency shelters for the homeless, specialty shelters (homes for battered women), and transitional living facilities for exoffenders, mentally ill, and substance abusers. Only one study (Cowan et al., 1986) restricted the sample of settings to missions and shelters. None attempted to supplement the administrative data by directly counting the homeless in the streets or public places.

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[2] In commenting on a draft of this report, HUD noted that correcting for this error would reduce the national estimate of the number of homeless persons from 192,000 to 168,000.

[3] The Department of Commerce also noted several additional limitations to the use of the "casual count." See appendix XI.

Implementation

Studies relying on service utilization data from multiple sources must account for the fact that users of services move from agency to agency. Aggregating the number of service users across agencies without controlling for duplication would result in an artificially high estimate of the number of homeless who use shelters.[4] This source of bias was addressed the most adequately in the study of homelessness in Baltimore (Cowan et al., 1986). Here, unique identifiers were assigned to persons who utilized shelters, and procedures were developed to identify duplicates in the data base. Gist and Welch (1986) attempted to adjust for duplication using service providers' estimates of the number of repeat users in the course of the year. The issue of duplication was less directly addressed in two utilization-based studies (Health and Welfare Council of Central Maryland, 1986, and New York State Department of Social Services, 1984). Here, service providers were asked to provide data for an average night, and these data were aggregated.

Deriving the Population Estimate

Approaches to deriving an estimate varied from simple aggregates of "average" utilization across agencies to the application of "capture-recapture" or dual system estimators. In its simplest form, capture-recapture techniques use the degree of overlap between two or more successive samples of a target population (where each element has been assigned a unique identifier) to estimate the total size of that population. Cowan et al. (1986) counted the number of homeless persons at eight points in time (between and within two seasons) and using dual system estimators were able to estimate the number of homeless persons over time.

Two of the utilization-based studies attempted to adjust their estimates of the number of homeless persons to account for the portion of the homeless population on the streets and in public places. In one study (New York Department of Social Services, 1984), the street-to-shelter ratios from studies conducted in Pittsburgh (Winograd, 1984) and Boston (City of Boston Emergency Shelter Commission, 1983) were applied to the use-based counts of homeless persons. However, the extent to which the street-to-shelter ratios obtained in Boston and Pittsburgh could be meaningfully applied in these cases was not tested in either study. Our analysis shows that shelter-to-street ratios vary considerably from city to city and across seasons.

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[4] Since this approach does not count individuals who do not use shelters, a duplicated count could be lower than the total number of homeless, especially in cities with a large street population.

Censuses and Estimates Based Upon Surveys

The final category of studies we reviewed involved censuses or surveys as the basis for estimating the number of homeless persons in a specific geographic area. These 16 studies were characterized by actual enumerations of shelters, institutions, streets, and other public places. (The methodological characteristics of the shelter and street components of these surveys are summarized in appendixes VI and VII.) We were particularly concerned in this set of studies with sampling, measurement, implementation, and how the estimate of the number of homeless was derived.

Sampling Method

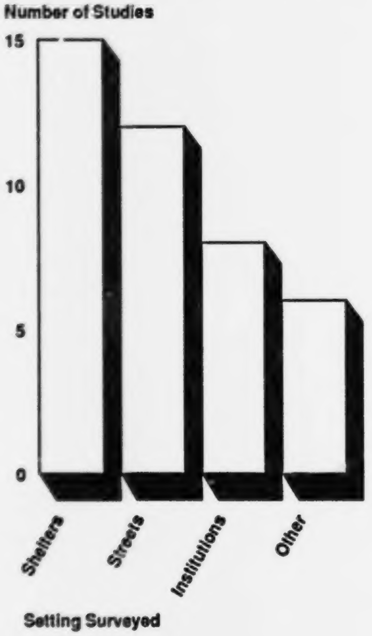
In rating the technical quality of each study's sampling, we considered several criteria: How many of the potential settings where the homeless are known to reside were surveyed? How were those settings selected (for example, all shelters or a sample)? How well was the geographic region in street surveys covered? And finally, were the surveys conducted at multiple points in time to account for seasonal variation in homelessness?

Number of Settings Surveyed

The 16 survey-based studies enumerated different combinations of four kinds of settings: shelters for the homeless, institutions where the homeless may be temporarily living (for example, jails), streets and public places, and "other" settings such as welfare motels. As shown in figure 2.1, the most frequently surveyed settings across the survey-based studies we reviewed were shelters. Indeed, all but 1 of our studies (Baumann et al., 1985) included a survey of shelters in their sampling design (15 studies). The second most frequently surveyed setting was streets (12 studies), followed by institutions (8 studies) and other settings (6 studies).

With regard to completeness of coverage, we found that 12 of the 16 studies included two or more settings in their survey designs. The combination of settings usually identified as the primary congregation sites for homeless persons—namely, shelters and streets—was covered by 11 survey-based studies. Four studies (City of Boston Emergency Shelter Commission, 1983; La Gory et al., 1987; Luke, 1986; Wiegand, 1985) included all four categories of settings in their surveys. The number of survey-based studies covering various combinations of settings can be seen in figure 2.2.

Figure 2.1: 16 Studies by Setting Surveyed



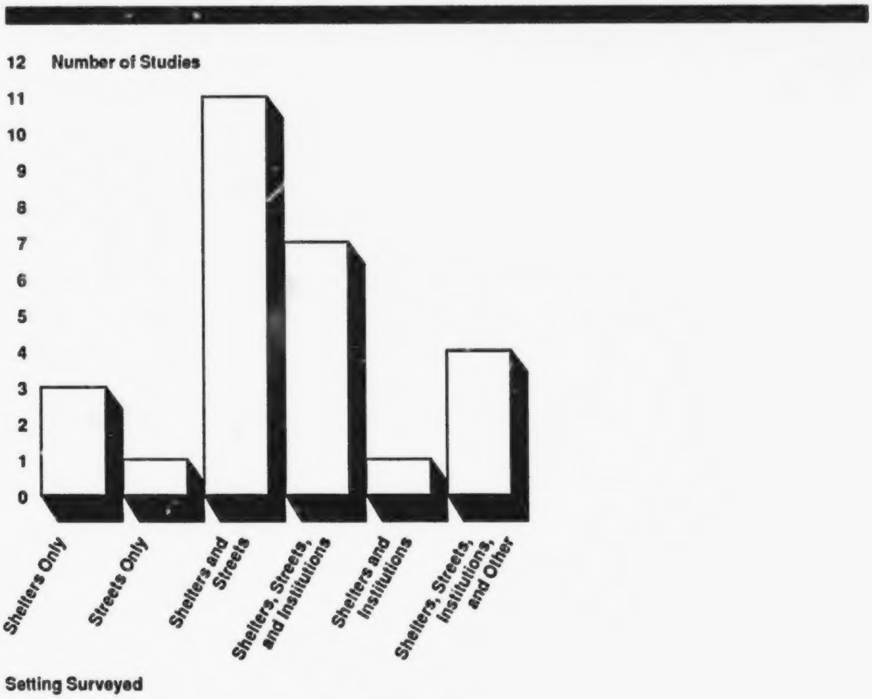
Shelters and Other Institutions

We also examined how specific shelters or other institutions were selected in each survey. That is, for each setting surveyed in the study, How adequate was the sampling of shelters and institutions? For shelter surveys, the sampling approach was typically a census of all or nearly all shelters in the region under study. One study employed a purposive sampling design and 1 study utilized a probability sampling strategy. This component of most surveys of homeless persons seems well developed and would allow for fairly precise estimates of the homeless population residing in emergency shelters and other institutions that temporarily house homeless persons.

Streets and Other Public Places

For surveys of streets and other public places, the major sampling design concern is how well the area under study was covered in the attempt to count the homeless. Based upon descriptions of areas searched in the street survey component of the studies, we rated 4 of

Figure 2.2: 16 Studies by Setting Combinations Surveyed



the 12 street surveys high in terms of representativeness. The remaining studies were rated moderate or low. The typical approach to identifying streets and public places for surveying was purposive sampling, where knowledge-holders or researchers identify areas in a region where the homeless are likely to be found. Eight of the 12 studies relied on this sampling strategy.

The strategy that we judged most sound used probability sampling techniques to select areas. This approach allowed for generalizations about the area under study and an idea of the precision of the estimate of the number of homeless obtained in the survey. For example, Rossi et al. (1986) selected a stratified random sample of census blocks in Chicago. Knowledgeable observers assisted in the stratification of census blocks into those with a high probability of encountering a homeless person (high-density blocks) and those with a low probability of encountering a homeless person (low-density blocks) to increase the efficiency of the sampling design. Interviewers then searched all sites where homeless persons might be found (alleys, streets, all-night movie houses, and so on) within selected census blocks. Hamilton, Rabinovitz, and Alschuler (1986) used a similar procedure by randomly selecting streets (block sides) and public places.

Sampling Seasons

A second sampling issue that we thought was important was the extent to which our studies accounted for seasonal variation in the prevalence of homelessness, though that source of variation would be more of an issue in nontemperate climates. Only 2 of the 12 street survey studies attempted to assess the number of homeless persons during different seasons; one of these (Wiegand, 1985) surveyed homeless persons in all four seasons.[5]

Measurement

In evaluating the quality of measurement in survey-based estimates, we focused on how well "homelessness" was determined in streets and public places. We looked at the method by which a respondent's homelessness was measured within each study. Determination of this status was categorized for the total study as one of three options: (1) inferred from appearance or location, (2) based upon answers to screening questions, and (3) other.

On the streets, it is difficult to determine who is homeless. Neither appearance nor just being on the street is a sure sign of homelessness. Many persons may appear ragged, unshaven, dirty, or disheveled and yet still have a regular place of residence intended for human habitation, while some of those who are involuntarily without fit shelter may struggle successfully to look clean and neat. Our review of the street studies revealed a nearly similar pattern to that found in the shelters. Of the 12 studies that had a street component, 8 measured homelessness by appearance, location, or both. Four studies (Baumann et al., 1985; City of Boston Emergency Shelter Commission, 1983; Rossi et al., 1986; Hamilton, Rabinovitz, and Alschuler, 1986) used screening questions to determine homelessness. An example of one of the screening questions used in the Rossi et al. (1986) study was "As of today, do you have some place here in Chicago that you consider to be your home or the place where you live?"

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[5] The importance of sampling seasons may depend on the geographic locale. Since this issue has not been investigated empirically for the homeless, we did not apply this criterion differentially across studies.

Although the use of screening questions is important in distinguishing homeless from nonhomeless persons, asking these questions is not without problems. Appelbaum (1987) points out that counts of the street homeless using screening questions assume that the respondents are honest in reporting their residential status. For example, given the time and location of persons during the 2 street surveys in the Rossi et al. (1986) study, Appelbaum argues that a much higher number were probably homeless. No empirical evidence was offered to establish the magnitude of this potential problem, however.

Implementation

In this study component, two criteria could be evaluated from our data. The first was presurvey enumeration of areas to be canvassed. Five of the 12 street surveys conducted a presurvey enumeration. Without a presurvey enumeration, nighttime search teams might overlook hiding places (such as small back alleys) and underestimate the number of homeless on the streets. The second criterion was whether the surveys were conducted at times of the day when homelessness would be relatively clear. We found that most of the studies did conduct their surveys in the late night and early morning hours, thereby increasing the likelihood of encountering a homeless person.

Deriving the Population Estimate

The studies we reviewed approached this task in a variety of ways (see appendix IV). Eight studies estimated the number of homeless by simply aggregating the total single-night counts obtained from shelters, streets, institutions, or other settings. Another approach, used by 2 studies, was to adjust street counts to correct for the fact that many homeless persons on the streets are concealed. For example, Baumann et al. (1985) applied a correction factor to street counts to account for concealed homeless persons based upon research methods from wildlife studies. Robinson (1985) based his adjustment (2.5 concealed persons for every nonconcealed person) on informant estimates of the number of persons who are truly hidden from the best of observers. Both of these adjustments seem reasonable given the consensus among researchers and service providers that many homeless persons on the street are well hidden during nighttime hours—probably for safety reasons. However, the accuracy of these adjustments has not been tested and should therefore be interpreted with caution.

Street-to-Shelter Ratios

The importance of including streets and other public places in counts of the homeless persons can be readily seen in table 2.4. Specifically, the studies we reviewed showed that from 6 to 59 percent of those who were counted were found on streets and other places. (In this analysis, we used actual counts of homeless persons in shelters and on the streets.) Further, the ability to generalize street-to-shelter ratios from cities that have counted the homeless on streets and shelters to other places has received considerable attention in recent discussions of the prevalence of homelessness. At least 2 studies reviewed in this report (La Gory et al., 1987; New York State Department of Social Services, 1984) have applied street-to-shelter ratios from other localities to their use-based counts of homeless persons. Table 2.4 presents the actual street-to-shelter ratios for the studies we reviewed that had both street and shelter components in their survey of homeless persons.

Table 2.4: Street-to-Shelter Ratios in 9 Studies

Study[a]	Season	Number of homeless	Shelters[b] Number	Shelters[b] %	Streets and other public places Number	Streets and other public places %	Street to shelter ratio (:100)
City of Boston (1986)	Fall	2,863	2,162	76%	701	24%	32
City of Boston Emergency Shelter Commission (1983)	Winter	2,767	1,577	57	1,190	43	75
Goplerud (1987)	Winter	612	578	94	34	6	6
Hamilton, Rabinovitz, and Alschuler (1987)	Fall	1,900	1,157	61	743	39	64
LaGory et al. (1987), Birmingham only	Winter	598	495	83	103	17	21
Robinson (1985)	Summer	2,562[c]	1,848	72	714	28	39
Rossi et al. (1986)	Fall	2,344	961	41	1,338	59	144
	Winter	2,020	1,492	74	528	27	35
Wiegand (1985)	Fall	821	667	82	144	18	21
	Winter	820	764	93	56	7	7
	Spring	836	725	86	111	14	15
	Summer	689	606	88	83	12	14

[a] Four studies were excluded: Luke (1986), because data on street count were not reported; Winograd (1983) because street data based on expert reports were not actual counts; Brown et al. (1983), because street and shelter data were not disaggregated; and Freeman and Hall (1987), because estimates of the number of homeless in shelters and on streets was based on respondents' self-reports, not actual counts.

[b] This includes all homeless persons sheltered (that is, those in shelters, detoxification centers, transitional living facilities, or mental health centers).

[c] Total does not include adjustment for hidden homeless.

Perhaps the most interesting finding is that of the 12 estimates of the street-to-shelter ratio (two studies had multiple street-to-shelter ratio estimates), only 1 estimate indicated there are more homeless persons on the streets than in shelters (Rossi et al., 1986). Although a majority of the estimates reported showed more homeless persons in shelters than on the streets, there was considerable variability in the magnitude of that ratio between and within studies: for every 100 persons in shelters during the winter, there were 7 street persons in Nashville and 35 in Chicago. In Boston during the winter of 1983, there were 75 persons on the streets for every 100 persons in shelters.

The variability in street-to-shelter ratios found between localities is also evident within localities. In the Nashville study (Wiegand, 1985), for every 100 persons in shelters during the fall there were 21 persons on the streets; during the winter, there were 7 persons on the street for every 100 in shelters. The street-to-shelter ratios for the spring and summer months were similar (15:100 and 14:100, respectively). Similarly, in the Chicago study (Rossi et al., 1986), the street-to-shelter ratio changed from 144 street persons for every 100 in shelters in the fall to 35 street persons for every 100 in shelters in the winter.

These findings suggest that while it is important to attempt to estimate the size of the portion of the homeless population that is on the streets and in public places when study resources do not allow for actual counts, street-to-shelter ratios from other studies must be applied with caution. More needs to be known about the correlates of street-to-shelter ratios (for example, regional differences, seasonal effects, shelter bed capacities) and the interaction of these factors (for example, region by season) before street-to-shelter ratios can be applied to utilization-based estimates of homeless persons.

Variability in Estimates of the General Homeless Population

A distinctive feature of current estimates of the number of homeless is their variability. As noted earlier, national population estimates range from 250,000 to 3 million. What are some possible explanations for these differences? Variability in estimates of the number of homeless could be associated with true differences in the prevalence of homelessness (in the case of local estimates), the definition of homelessness, the type of estimate (point in time or annual) derived, the year in which the study was conducted, type of method used, and technical quality of the study. The idea in getting a trustworthy count is to rule out differences resulting from all extraneous factors except true differences in prevalence. Below, we examine the relationship between two of these factors—choice of method and technical quality and variability in estimates of the homeless population.

Establishing Rates of Homelessness

Taking the first step in our analysis, we converted estimates of the number of homeless persons contained in our studies into population rates (per 10,000) using population data from time period and region identified in the study (for example, city population for 1984).[6] This allowed us to compare estimates from different sites using different methods along a common measure and thus begin to sort out the effects of methodological choices and technical quality.

Does Method Type Affect Variation in Estimates?

We looked into the association between variability in homelessness rates and method type (that is, expert estimates, utilization, or survey and census). The overall range in rates across all types of studies was 6 to 95 per 10,000.

Studies employing the expert judgment method produced a median homeless rate of 29 per 10,000 (10 to 95 per 10,000). Utilization-based studies produced a median homeless rate of 18 per 10,000 and survey- or census-based studies revealed a median rate of 13 per 10,000. Variability in estimates does appear to be associated with the type of method that was used. The median rate of homelessness for expert-judgment studies was more than twice as high as the median rate of homelessness for survey- or census-based studies. The range of estimates of utilization-based studies was 7 to 27 per 10,000 and of survey- or census-based studies 6 to 51 per 10,000.

Does Study Quality Reduce Variation in Estimates?

We also looked at the association between study quality and variation in the range of estimates. A study's technical quality was based on how well the study met our sampling, measurement, implementation, and estimation procedure criteria. We found that high-quality studies produced a median homeless rate of 13 per 10,000 whereas lower-quality studies revealed a median homeless rate of 22 per 10,000. That is, when high-quality studies are used, the median rate of homelessness is about 40-percent lower than the median rate produced by lower-quality studies. Further, the variability in rates, while quite large, was substantially less (6 to 50 per 10,000) when high-quality methods were used, compared to moderate to very low quality methods (7 to 95 per 10,000).[7]

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[6] Darcy and Jones (1975) was excluded from the analysis because the study was conducted outside the United States. Robinson (1985) reporting homelessness in Washington, D.C., was also excluded because it was not possible to derive a statistically meaningful population base for the area. When studies reported ranges of estimates, we computed a rate representing the midpoint of the reported range. When rates for multiple time periods were reported, we selected the estimate that was most comparable to the majority of estimates (that is, estimates of 1-night stays).

Conclusion

How sound are current estimates of the number of homeless persons? We found that there is a small number of studies that provide reasonably sound estimates of the homeless in specific localities. However, no single study in this group addressed all sources of bias associated with inquiries of this type. We also found that rates of homelessness and their variability were linked to method type and the technical quality of the study. The median homelessness rate was lower for survey- and census-based studies and studies rated higher in quality. The range in estimates was highest for studies using expert judgment and lowest for studies using utilization and survey approaches. These findings provide a framework for a method that could provide a more sound estimate of the size of the general homeless population.

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[7] If the Robinson study were included, the median rate for high-quality studies would have been 16 per 10,000; the range of estimates would have been 6 to 73 per 10,000. Thus, including this study would not have appreciably changed the results.

Chapter 3

How Sound Are Estimates of the Number of Chronically Mentally Ill Among the Homeless?

The second subquestion addressed in our information synthesis was about the soundness of current estimates of the prevalence of chronic mental illness among the general homeless population. For our synthesis, we reviewed studies that assessed mental illness as one component of their enumeration of the homeless population (see table 3.1).[1] Across the nine studies assessing mental illness, there was little consensus on the percentage of homeless persons who are chronically mentally ill. We

Table 3.1: 9 Studies' Methods and Rates of Mental Illness Among Homeless Persons

Study	Method	% mentally ill
Adult Residential Care Advocates (1984)	Provider estimates	26%
Baumann et al. (1985)[a]	Self-reported psychiatric history	10
	Standardized instrument (GAS)[b]	45
Brown et al. (1983)[c]	Self-reported psychiatric history	17
	Provider or surveyor estimates	20
Goplerud (1987)	Provider or surveyor estimates	29
HUD (1984)	Provider estimates	22
LaGory et al. (1986)	Self-reported psychiatric history	17
Mental Health Association of Greenville County (1986)	Self-reported psychiatric history	19
New York State Department of Social Services (1984)	Provider estimates	32
Rossi et al. (1986)	Standardized instrument, CES-D[d]	47
	Standardized instrument, PERI[e]	15
	Self-reported psychiatric history	23

[a] Although Baumann et al. (1985) used a second level of functioning instrument (FACTS) in their survey, data on the proportion of homeless who were considered low-functioning on the psychological and mental health dimensions of the instrument (interpersonal relations, thinking and feeling, family relations) were not reported.

[b] Global Assessment Scale.

[c] Proportion of homeless in a census who had been in a mental institution.

[d] Center for Epidemiologic Studies Depression Scale.

[e] Psychiatric Epidemiology Research Interview.

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[1] Although the Health and Welfare Council of Central Maryland (1986) did address the issue of mental illness in its survey, the study was not included in our analysis for two reasons: (1) no statewide aggregate figure on provider estimates of the proportion of clients with mental health problems and needs (item 2.6) was presented, and (2) provider estimates of the proportion of clients for whom deinstitutionalization from a state mental health hospital was a primary cause of homelessness (item 2.3) were not, in our judgment, intended to substitute for estimates of the proportion of clients who were mentally ill.

found that the prevalence of chronic mental illness among the homeless ranged from 10 percent to 47 percent.[2]

Similar to what we found in estimates of the homeless, this range of estimates seems to result, at least in part, from methodological variation. Moreover, the estimates we judged reasonably sound were conducted at the local level. Below, we describe the three approaches used to derive those estimates and critique their soundness. Then we examine the variability among these estimates and offer some suggestions for future considerations in developing measures to assess mental illness among the homeless.

Approaches to Identifying the Chronically Mentally Ill

The prevalence of chronic mental illness among homeless persons was assessed in the studies we reviewed in three ways: observations of providers of services and other key informants, self-reported history of psychiatric hospitalization, and administration of standardized assessment scales. Two studies (Baumann et al., 1985, and Rossi et al., 1986) used combinations of these approaches. A summary is in table 3.2.

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[2] In these analyses, we used percentages rather than rates per 10,000 because percentages are more sensitive indicators of differences associated with measurement methodology.

Table 3.2: Measures to Assess Prevalence of Mental Illness Among the Homeless[a]

Method	Instrument	Description	Study
Self-reported psychiatric history	—	Respondents asked about previous psychiatric hospitalization	Baumann et al. (1985), Brown et al. (1983), La Gory et al. (1987), Lundy and Kalob (1985), Mental Health Association of Greenville County (1986), Rossi et al. (1986)
Provider estimates	—	Service providers asked to estimate the number or proportion of homeless mentally ill persons	Adult Residential Care Advocates (1984), Goplerud (1987), HUD (1984), New York State Department of Social Services (1984)
Standardized scales			
Symptom	Center for Epidemiologic Studies Depression Scale (CES-D)	Self-report of depressive symptoms and current distress; number and content of items modified for use with the homeless	Rossi et al. (1986)
	Psychiatric epidemiology research interview (PERI)—false beliefs and perceptions scale	Self-report of psychotic beliefs, feelings, and perceptions; number and content of items modified for use with homeless	Rossi et al. (1986)
Level of functioning	Global Assessment Scale (GAS)	Respondents rated on overall functioning and symptoms	Baumann et al. (1985)

[a]Includes only count studies.

For each study, we evaluated the methodology used to assess mental illness in terms of its reliability and concurrent validity and the extent to which the measure dealt with four problems inherent in assessing the mental health of homeless persons—namely, measuring the duration or periodicity of mental disorders, differentiating the effects of homelessness from mental illness, identifying the dually disturbed (that is, persons with both mental illness and substance abuse), and minimizing observer bias. Our final criterion concerned the feasibility of the methodology's use in large-scale field studies of the prevalence of mental illness among homeless persons.[3] A comparison of the three approaches to assessing mental health status in our review is in table 3.3.

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[3] These criteria are described in detail in appendix I.

Table 3.3: Assessment of Mental Health Measures in 9 Studies[a]

Measure	Reliability	Concurrent validity	Measures duration or periodicity	Potential confounding with effects of homelessness	Identifies the dually disordered	Practical for field surveys	Observer bias
Provider estimates	Low	Low	No	High	Possible	Yes	Possible
Self-reported psychiatric history	Low	Low	Yes	Low	No	Yes	Low
Standardized scale							
Symptom							
CES-D[b]	[c]	[c]	No	High	No	Yes	Low
PERI[d]	[c]	Moderate	No	Moderate	No	Yes	Low
Level of functioning							
GAS[e]	High	Moderate	No	High	No	Yes	Moderate
FACTS[f]	[c]	Moderate	No	Moderate	Yes	Yes	Moderate

[a] These ratings were based on two reviews of the literature on the measurement of the prevalence of mental disorder among homeless persons: Koegel and Burnam (forthcoming) and Lovell et al. (forthcoming).

[b] Center for Epidemiologic Studies Depression Scale.

[c] Data not presented.

[d] Psychiatric Epidemiologic Research Interview—False Beliefs and Perceptions Scale.

[e] Global Assessment Scale.

[f] Form for the Assessment of Client Treatment Services.

Estimates Based on Providers' Observations

Four studies used providers' observations in determining the proportion of the homeless who were chronically mentally ill (Adult Residential Care Advocates, 1984; Goplerud, 1987; New York State Department of Social Services, 1984; HUD, 1984). Because of its ease of use and unobtrusiveness, this approach to determining the number of chronically mentally ill is appealing. In addition, persons who have had a great deal of exposure to the many subgroups among the generally homeless (such as shelter operators) may well be able to identify individuals who are experiencing severe mental illness or substance abuse problems.

In spite of the advantages of this approach, we judged estimates derived by providers' observation low on our reliability and validity criteria for a number of reasons. First, it is unclear from our review how "mental illness" was defined in questions posed to providers. Without specific criteria on what constituted mental illness, observers are not likely to agree. Second, studies using providers' observations present no data on how these observations agree with other assessments of mental health status. Third, this approach to assessing mental health status is vulnerable to observer bias. Because chronically mentally ill persons exhibit unusual and often disruptive behavior, they are more salient to service providers. This increased salience may lead to overestimates of the number of chronically mentally ill persons among their clients. Finally, service providers may overestimate the size of the homeless mentally ill population because it increases the visibility of this subpopulation of homeless persons, which in turn could lead to the need for more resources.

Moreover, the use of a service provider's observations may not differentiate the confounding effects of life on the streets from actual mental illness. Many homeless persons may exhibit behavior or characteristics indicative of psychiatrically defined impairment that in fact are characteristics of living on the streets. Lovell et al. (forthcoming) suggest that homeless women exhibit many unusual behaviors (they appear to be afraid, have poor hygiene, exhibit eccentric dress, are verbally abusive) as survival strategies in negotiating life in shelter and street environments. Finally, this approach does not provide a sound assessment of the duration or periodicity of mental illness. Service providers' estimates of the duration or cyclical nature of the mental disorder are limited in many cases by the short length of stay of homeless persons in emergency shelters.

Estimates Based on Self-Reported Psychiatric History

Five studies used self-reported histories of psychiatric hospitalization as the method for identifying the chronically mentally ill among homeless persons (Baumann et al, 1985; La Gory et al., 1986; Lundy and Kalob, 1985; Mental Health Association of Greenville County, 1986; and Rossi et al., 1986). Using the history of psychiatric hospitalization as a measure of the prevalence of mental illness among homeless persons offers several advantages over observation-based providers' estimates. It has the potential to describe the duration of mental disorders, it minimizes observer bias, and it is not likely to be confounded with the effects of life on the streets.

However, we judged this approach unsound for two reasons. First, because of the severity of their mental illness, many individuals are unable to communicate or recall their hospitalization history or do so in an inconsistent manner; some, because of the stigma of mental illness, may be unwilling to discuss that history. The second problem is that this approach misclassifies as mentally ill those who have a history of psychiatric hospitalization but are currently not mentally ill.

Estimates Based on Standardized Scales

Only two of the nine studies we reviewed assessed the mental health status of homeless persons using standardized mental status assessment tools (Baumann et al., 1985, and Rossi et al., 1986). Baumann et al. (1985) used a level-of-functioning measure (GAS, the Global Assessment Scale) and Rossi et al. (1986) used modified versions of two symptom-based scales: the Center for Epidemiologic Studies Depression Scale (CES-D) and the psychoticism scale of the Psychiatric Epidemiologic Research Interview (PERI). We judged these measures the most sound of the approaches employed in our studies because the psychometric properties of the original versions of the scales are known, they minimize observer bias, and they are practical in field studies.

The approach taken by Rossi et al. (1986) was to look for general symptoms often associated with mental illness—depression and false beliefs and perceptions. For their depression measure, they used 6 of 20 items from the CES-D, which is, more precisely, a nonspecific measure of demoralization and distress. An example of an item chosen from the CES-D is "Did you feel discouraged or worried about your future?" Forty-seven percent of the homeless interviewed were classified high on this modified version of the CES-D.

Full versions of those standardized scales are generally more sound than observations from providers or self-reported psychiatric history. However, they do not adequately address the issue of duration of disorders, identify the persons with a dual disorder, or differentiate the effects of homelessness from the effects of mental illness. The last issue is particularly problematic with scales on functioning like the Global Assessment Scale or with measures of depression such as the CES-D. Observed passivity, despondency, suspiciousness, and uncooperative behavior, or self-reports of depression, paranoid ideation, sleep disturbances, and lack of appetite, may reflect a reaction to the loss of one's home and the demands of shelter environment itself. Also, these scales do not discriminate the homeless persons who are acutely mentally ill from those who are chronically mentally ill.[4] In light of these issues, the application of these scales could lead to an overestimate of the prevalence of psychiatric disorder among the homeless.

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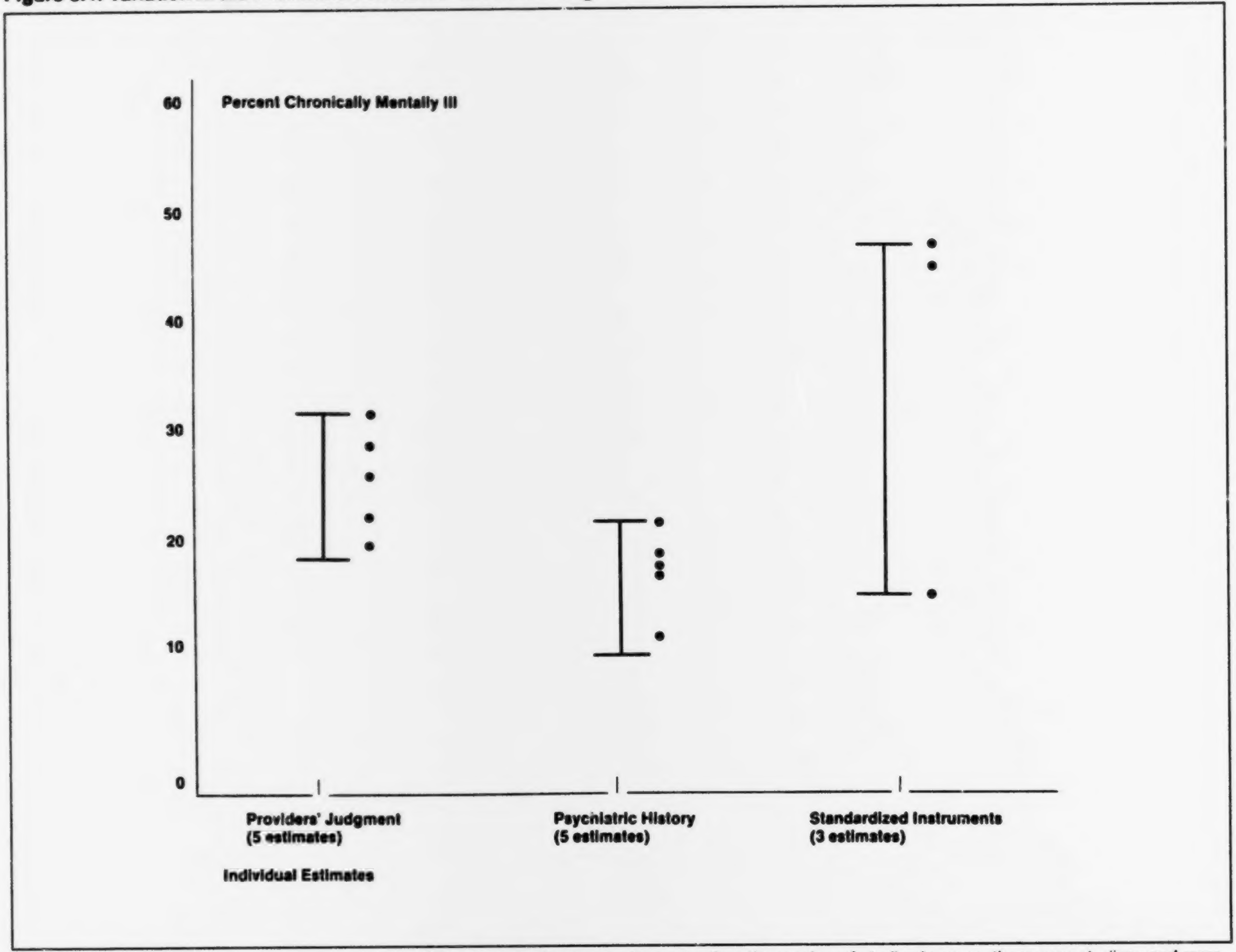
[4] Chronically mentally ill persons are usually defined as individuals experiencing a major mental disorder (schizophrenia or an affective disorder) that manifests itself episodically over an extended period of time. Acutely mentally ill persons, as meant here, refers to persons who manifest time-limited symptoms of mental disorder.

Figure 3.1: Variation in the Prevalence of Mental Illness Among the General Homeless Population[a]



[a]The number of estimates is greater than the number of studies because three case studies used more than one method.

Variation Among Estimates

As was found in our evaluation of the variation among rates of homelessness, the range of prevalence of mental illness varied by study type (see figure 3.1). Estimates of the prevalence of mental illness among homeless persons based upon the subjective estimates of providers ranged from 22 to 32 percent. That range was increased somewhat when self-reported psychiatric hospitalization was the criterion for identifying the chronically mentally ill. Estimates based upon this more direct measure of mental health ranged from 10 percent to 23 percent. Finally, estimates based upon standardized instruments showed the highest variation at 15-47 percent.

Other Potential Methods

Our review of current estimates of the proportion of the homeless who are chronically mentally ill was restricted to studies that counted the homeless and, at the same time, assessed mental illness. As shown in the previous section, there are likely to be numerous technical problems with these methods. However, additional approaches to assessing the prevalence of mental illness among the homeless have been used in numerous descriptive (not population enumeration) studies. The National Institute of Mental Health (NIMH) has supported 10 such studies (Morrissey and Dennis, 1986). An inventory of measures used in many of these descriptive studies is shown in table 3.4. The categorization shown in table 3.4 overlaps with the first two categories outlined above (providers' observations and psychiatric hospitalization) and breaks out the final category (standardized scales) into three subcategories: symptom scales, level of functioning scales, and structured interviews yielding diagnoses. Also added to the categorization is a final category: clinical evaluations that yield specific diagnoses.

To illustrate the state of the art in this area, we selected two studies (Farr et al., 1986, and Struening, 1987) because the characteristics of their methodologies for assessing mental illness addressed a majority of our evaluation criteria (see table 3.5 on page 41). In the Farr et al. study, the Diagnostic Interview Schedule (DIS) was applied to a broad-based sample of homeless persons residing in the Skid Row area of downtown Los Angeles.

Table 3.4: Measures Used in 13 Studies to Assess Prevalence of Mental Illness Among Homeless Persons

Measure	Instrument	Description	Study
Self-reported psychiatric history	—	Respondents asked about previous psychiatric hospitalization	Struening (1986)
Standardized scale			
Symptom	Center for Epidemiologic Studies Depression Scale (CES-D)	Self-report of depressive symptoms and current distress; number and content of items modified for use with homeless persons	Farr et al. (1986), Robertson et al. (1985), Struening (1987)
	Psychiatric Epidemiology Research Interview (PERI)—psychoticism scale	Self-report of psychotic beliefs, feelings, and perceptions; modified for use with the homeless	Struening (1987)
	Schedule of Affective Disorders and Schizophrenia change version (SADS-C)	Respondents rated by trained interviewers on 7 dimensions of psychopathology	Barrow and Lovell (1984)
	Brief Symptom Inventory (BSI)	Self-report on 9 psychological and social dimensions	Morse (1984), Morse and Caslyn (1984), Solarz and Mowbray (1985)
	Psychiatric Evaluation Form (PEF)	Rating of respondents on 19 symptoms, using clinical records and brief interviews	Chafetz and Goldfinger (1984)
	Psychiatric Status Schedule (PSS)	Self-report on 10 symptom areas	Roth et al. (1984)
	General Health Questionnaire (GHQ)	Self-report on 20 items covering current distress	Fisher et al. (1986)
Level of functioning	Global Assessment Scale (GAS)	Respondents rated on overall functioning and symptomatology	Mulkern et al. (1985)
	Structured Level of Functioning (SLOF)	Respondents rated on 6 dimensions, including social acceptability, skills, personal care	Schneider and Struening (1983)
Structured interview that yields diagnoses	Diagnostic Interview Schedule (DIS)	Respondents interviewed by lay interviewers on substance abuse, schizophrenic disorders, affective disorders, anxiety and somatoform disorders, antisocial personality, cognitive impairment; generates DSM-III diagnoses	Farr et al. (1986), Fisher et al. (1986)
	Structured Clinical Interview for DSM-III (SCID)	Respondents interviewed by trained clinicians on schizophreniform, schizoaffective-depressed, schizoaffective-bipolar; depression with psychotic features, other psychotic disorders; generates DSM-III diagnoses	Struening and Susser (1986)
	Schedule of Affective Disorders and Schizophrenia Lifetime Version (SADS-L)	Respondents interviewed by clinically trained interviewers on schizophrenia, schizoaffective, anxiety, and personality disorders, alcoholism and drug abuse; generates research diagnostic criteria (RDC) diagnoses	Barrow and Lovell (1984)
Clinical evaluations	—	Respondents interviewed and DSM-III or other clinical benchmark criteria are applied	Arce et al. (1983), Bassuk et al. (1984)

Table 3.5: Four Mental Health Status Measures Used in Descriptive Studies of Homeless Persons[a]

Measure	Reliability	Concurrent validity	Expresses duration or periodicity	Potential confounding with effects of homelessness	Identifies the dually disordered	Practical for field surveys	Observer bias
Self-reported psychiatric history	Low	Low	Yes	Low	No	Yes	Low
Standardized scale							
Symptom	High	Moderate	No	High	No	Yes	Low
Level of functioning	High	Moderate	No	High	No	Yes	Moderate
Structured interview yielding diagnoses	High	High	Yes	Low	Yes	No	Low
Clinical evaluation	Low to moderate	No data	Yes	High	Yes	No	Moderate

[a] The ratings in this table were based primarily on two review of the literature on the measurement of mental disorders among homeless persons: Koegel and Burnham (forthcoming) and Lovell et al. (forthcoming).

The Diagnostic Interview Schedule is a standardized diagnostic instrument administered by trained lay interviewers and scored with a computerized scoring algorithm to generate specific diagnostic categories found in DSM-III (*Diagnostic and Statistical Manual*, 3rd edition). This instrument is reliable, has demonstrated concurrent validity (Robins et al. 1981 and 1982), describes the duration of a disorder, generates a diagnosis of substance abuse, and minimizes observer bias. Perhaps most important, the results of recent research using the DIS with homeless persons suggest the instrument adequately discriminates those who are truly mentally ill from those who are reacting to the demands of life in shelters or on the streets. The major drawback to this instrument is that in its present form (the original version of the instrument took 2 hours to complete), it is not practical for field studies of homeless persons. However, a short version is currently being tested at the RAND Corporation.

The promise of this instrument is that it addresses the issue of teasing out environmental factors from underlying mental illness by providing highly specific information about an individual's psychiatric status and it addresses the issue of duration of the disorder—that is, the instrument produces a current as well as a lifetime diagnosis.

A second approach similar to Rossi's (1986), in the Struening (1987) study, was taken to assess mental illness that addresses a majority of our evaluation criteria. Here multiple measures were used to counterbalance the vulnerabilities of any one method. Specifically, the CES-D, PERI, history of psychiatric hospitalization, and observation were used to define a homeless person as mentally ill. The first two measures have as their strengths high reliability, moderate concurrent validity, practicality, and low observer bias. Their primary weaknesses, as outlined above, are their inability to discriminate the effects of homelessness from actual mental illness, to measure duration, or to identify the dually disordered. Application of the two other measures, history of psychiatric hospitalization and observation, accounts somewhat for these weaknesses. A history of psychiatric hospitalization can reasonably deal with the confounding of mental illness with the effects of homelessness; service provider and clinical observations can be used to identify persons who have substance abuse problems.

Conclusion

What can be said of the soundness of current estimates of homeless persons who are chronically mentally ill? We found no credible national estimates, and the local estimates using sounder methods are limited in their generalizations and do not address a number of important measurement issues. We did, however, identify some techniques that show promise and with further research might be adapted for larger-scale use, offering some foundation for a better national figure.

Options for Counting the Homeless and Estimating Trends, Recommendations, and Agency Comments

Given the results of our evaluation of prior studies, the findings from our case studies, and the suggestions from our panel of experts, we developed four options for obtaining a nationwide estimate of the number of persons who are chronically mentally ill and homeless. We propose options rather than recommending a single approach because estimates can be used for different purposes, some of which require more precision than others. Generally, the greater the precision wanted, the higher the cost.

The first option would build upon survey-based approaches to enumerating the homeless. Here researchers would survey all settings where homeless persons are known to reside (shelters, institutions, streets, other public places, and so on) at different times during the year. The second option would develop a nationwide, client-level, utilization data base for homeless and homeless mentally ill persons by building upon existing administrative data bases and on reporting requirements contained in the recently enacted legislation for homeless persons (Public Law 100-77). Under this option, programs receiving funding under this legislation would be required to count and track both homeless and homeless mentally ill persons over time. In the third option, the count of homeless persons would be based on the statistical reporting system developed in the second option, supplemented by street surveys in selected sites. The final option calls for a system of social indicators (using the survey methodology proposed in option 1) that could be used to estimate the size of the homeless population indirectly as well as changes in that population over time.

Definitions

Homelessness

Homelessness can be thought of as a place on a continuum running from obviously domiciled to obviously homeless. We suggest a focus on persons in the "obviously homeless" end of that continuum. This group has been often referred to as the "literally" homeless (Rossi et al., 1986). The literally homeless are persons who clearly do not have access to conventional dwellings. Under the Stewart B. McKinney Homeless Assistance Act, the term "homeless" or "homeless individual" includes an individual who lacks a fixed, regular, and adequate nighttime residence and who has a primary nighttime residence that is

"(A) a supervised publicly or privately operated shelter designed to provide temporary living accommodations including welfare hotels, congregate shelters, and transitional housing for the mentally ill; (B) an institution that provides a temporary residence for individuals intended to be institutionalized; or (C) a public or private place not designed for, or ordinarily used as, regular sleeping accommodations for human beings." (Public Law 100-77, sec. 103 (a)).

Literally homeless individuals can be contrasted with those who are about in the middle of the continuum—namely, the "precariously housed." The precariously housed are persons who are currently living in what would be considered a conventional dwelling but whose connection to that domicile is temporary or tenuous. An example of persons in this category would be those unexpectedly evicted from their homes who found temporary shelter with relatives or friends. The options presented below do not attempt to enumerate the precariously housed.

Table 4.1: 9 Options for Counting Homeless Persons[a]

Source of bias	Social indicators	One-time key informant survey
Sampling		
Some service delivery settings not surveyed[b]	NA	+
Streets and other public places not surveyed	NA	o
Seasons not sampled	+	+
Monthly variation in homelessness not sampled	+	+
Measurement		
Influenced by reasons to over- or underreport count	+	o
Duplication in counting	o	o
Movement in and out of homelessness	o	+
Geographic in-and-out migration	o	+
Noncooperation from homeless respondents	+	+
Unreliability of self-reports	+	+
Obtrusiveness of interview of homeless	+	+
Obtrusiveness of survey of providers	+	o

Chronically Mentally Ill

We suggest that the chronically mentally ill are persons who are experiencing severe and persistent mental or emotional disorders (such as schizophrenia or major depression) that interfere with their functioning and require prolonged professional care (Bachrach, 1984).

Approaches to Counting the Homeless Chronically Mentally Ill

Our review of prior studies indicated that the task of counting homeless mentally ill persons has been approached in a number of ways: key informant surveys, one-time surveys of shelters, analyses of shelter utilization data, and surveys of streets and other public places. Several studies combined two or more of these approaches. We identified nine options for counting homeless mentally ill persons and considered the extent to which each addressed a number of biases common to surveys of this type (see table 4.1).

Shelters census		Ongoing statistical reporting[b]		One-time census of shelters, streets, and institutions	Multiple census	
One-time	Multiple	Shelters	Shelters and streets		Shelters, streets, and institutions	Shelters, streets, and institutions with tagging
o	o	o	o	+	+	+
o	o	o	+	+	+	+
o	+	+	+	o	+	+
o	+	+	+	o	+	+
+	+	+	+	+	+	+
+	o	+	+	+	o	+
o	o	+	+	o	o	+
o	o	+	+	o	o	+
o	o	o	o	o	o	o
o	o	o	o	o	o	o
o	o	+	+	o	o	o
o	o	+	+	o	o	o

[a] o = method does not address sources of bias; + = method does address sources of bias; NA = sources of bias do not apply to this method. Costs are lower at the left side of the table and become progressively greater toward the right side of the table.

[b] Assumes only shelters or streets and shelters are providing data.

As is shown in table 4.1, each of the options possesses strengths and weaknesses with regard to the specific sources of sampling or measurement bias vis-a-vis cost. A one-time census of shelters and multiple census surveys of shelters are comparatively low in cost but address the fewest sources of bias. The key informant survey addresses several sources of bias (such as problems with respondents' self-reports) but does not deal with the problem of the count being influenced by the intent to overestimate the number of homeless—a source of bias that in some instances contributed to the controversy over the magnitude of the homelessness problem. The multiple surveys of shelters, institutions, and streets address a majority of the sampling biases but clearly are the most resource-intensive.

Although the choice among the options was not clearcut, we selected four of the nine as particularly worthy of consideration when improvements in counts were sought. Our selection was based on how each addressed the sources of bias vis-a-vis cost. The first approach we selected was the one-time census of shelters, institutions, and streets. We selected this method because it addresses the large number of sampling biases inherent in counting the homeless and homeless chronically mentally ill persons. However, it is also costly and cannot be usefully undertaken until greater progress has been made in measuring mental illness.

The next two approaches we selected also address a large number of biases, are less resource-intensive, and build on mandated annual reporting requirements in the Stewart B. McKinney Homeless Assistance Act (Public Law 100-77). The second approach we selected was a statistical reporting system. The strength of this method lies in its capacity to track changes in the size and movement of the homeless population on a continuing basis and provide a lower-bound estimate of the number of homeless. The third approach we selected augments the ongoing statistical reporting system by counting homeless persons who probably do not use the service delivery system. Adding the street survey addresses a major sampling bias inherent in a utilization-based count but increases costs significantly. The fourth approach—development of social indicators—is likely to be the least expensive but does not deal directly with the biases associated with counting the homeless mentally ill.

Option 1: One-Time Survey of Shelters, Institutions, and Streets

The first method builds upon the survey-based approaches to enumerating homeless persons (Rossi et al., 1986; Wiegand, 1986). This design calls for a representative sample of homeless individuals who reside in shelters and institutions and on the streets. The goal here is to maximize the likelihood of covering all settings where homeless persons might be found.

In order to generate a nationwide count of homeless and homeless chronically mentally ill persons, a two-stage probability sample of cities and likely residential settings within each city could be drawn. The first stage could be a probability sample of urban areas nationwide—for example, cities with populations of 50,000 or more. The second stage could be a probability sample of shelters and institutions, and streets within each city selected in stage one. All homeless persons in these shelters and institutions and on streets could be enumerated. Based on these figures, and figures from in-depth interviews aimed at identifying mental illness, a narrower range of estimates of the nation's homeless mentally ill population than is currently available could be generated.

To account for the known seasonal variation in the number of homeless persons, a "rolling" sampling strategy could be employed. This sampling strategy would account for seasonal variation in homelessness by randomly assigning the selected cities to two or more seasons. The cities could be randomly assigned to different times within a season (for example, within months) to account for monthly fluctuations in homelessness. Each component of this approach—shelters, institutions, and street surveys—and the associated design and methods issues are described in more detail in appendix VIII.

Advantages and Disadvantages

The main strength of this survey-based option is that it would yield a better, but not entirely sound, estimate of the number of homeless chronically mentally ill persons, following validation studies of the measures of mental illness. The source of this precision comes from the sampling design, which deals with one of the major biases in many studies—that is, not sampling a setting where homeless persons are known to reside. Also, the proposed method attempts to account for another major source of error in surveys of the homeless—not adequately sampling enough points in time to describe the cyclically homeless.

One disadvantage to this proposed survey-based approach is that it is a resource-intensive method. Surveys of street settings are very expensive. Also, the front-end work in gaining access to institutional records necessary for specifying the sampling frame would be costly. Adding to these two cost factors is the need that the survey be conducted with specially trained staff.

A second disadvantage in the proposed survey-based approach is that we must rely on self-reports to determine the length of time respondents have been homeless and the number of times they have been homeless. These data are the basis upon which estimates of annual incidence and prevalence would be made. The extent to which some homeless persons, especially the mentally ill, can or would provide accurate residential histories is open to question.

Option 2: Statistical Reporting System

An alternative to the survey-based approach described above would be to take advantage of the reporting requirements contained in Public Law 100-77. In this option, a new nationwide statistical reporting system could be developed around either existing administrative data systems or the statutory requirements. This information system could provide the data (for example, an unduplicated count of the homeless, length of time homeless, and mental health status) necessary for a count of homeless chronically mentally ill persons who receive services.

There are several opportunities in Public Law 100-77 for the development of such a statistical reporting system. These include, for example, the reporting requirements in subtitle B of title VI, Community Mental Health Services (section 611 amending title V of the Public Health Service Act, 42 U.S.C. sec. 290aa et seq.). Under the amended Public Health Service Act, states are required to submit annual reports to the secretary of the Department of Health and Human Services (HHS) that contain information deemed necessary by the secretary, after consultation with the states and the comptroller general (section 527), to assess the effectiveness of the block grant program for services to homeless individuals who are chronically mentally ill. Also, recipients of block grants are required in section 526a to determine the areas in their states where the greatest number of homeless persons with a need for mental health services reside. This implies that an enumeration or some system for counting homeless persons has been or will be developed by the states.

Such a reporting system could be added to current nationwide reporting systems or developed in a manner similar to systems such as those available through the National Institute of Mental Health. Three of the four data collection programs that are part of the Institute's national reporting system would be candidates for tracking homeless mentally ill persons. The broadest program within the national reporting system is a survey conducted in over 5,000 mental health facilities every 2 years. The two other surveys—special patient surveys and expanded patient surveys—are conducted less frequently and involve sampling clients. The sampling and infrequent nature of these surveys would pose problems for monitoring clients over time. Nevertheless, data reporting systems in place could be expanded or new data systems could be started as a result of the McKinney Act.

At the local level, our case studies revealed that the Los Angeles County Department of Mental Health has established an information system that tracks homeless mentally ill persons who have used the county's mental health services. This information system can provide data on the number of unduplicated clients and on clients' characteristics, and it can track clients' movement through the mental health system. (A more detailed description of how two other cities are approaching the issue of counting the homeless mentally ill is provided in appendix IX.)

Advantages and Disadvantages

There are several advantages to improving an existing reporting system or developing a new statistical reporting system to count the homeless chronically mentally ill. Such a system would provide an ongoing count of the number of homeless seeking assistance. Reliable figures of the treated incidence and prevalence of homelessness for a variety of time periods (monthly, quarterly, and annually) could be maintained. From these figures, it would be possible to look at trends in service use and reported homelessness. Also, this method would eliminate the need to rely on self-reports of past residential history to determine the length of time a person is homeless or indicate the number of episodes of homelessness. It would be possible to track residential status directly with such a reporting system. Moreover, there are, at present, prototypes of this kind of statistical reporting system for the homeless. Most notable is the system developed at the Social and Demographic Research Institute to evaluate the Health Care for the Homeless Program funded by the Robert Wood Johnson Foundation and the Pew Memorial Trust. Finally, this approach may be less resource-intensive than the survey-based approach.

The primary disadvantage of this approach to counting the homeless is that it would describe only the homeless persons who come in contact with the human-service system. Many homeless persons are actively excluded or avoid human-service systems. Also, not all agencies that serve the homeless in an urban area receive funding appropriated through Public Law 100-77. In one of our case studies, we found that a number of smaller social service programs refused federal money of any kind because they thought those funds limited their flexibility. Moreover, some of the reporting requirements in the legislation do not delineate the specific data collection elements necessary, and it is unclear at present whether the executive agencies charged with monitoring funded programs would be receptive to suggestions about a statistical reporting system.

Finally, a statistical reporting system would require the development of a quality-control system to ensure accurate data collection, processing, and reporting and an assessment of the potential burden placed upon participants in the system.

Option 3: Statistical Reporting System Supplemented by Street Surveys

The third option represents a refinement of the statistical reporting system described in option 2. The counts obtained from the reporting system could be supplemented with data from street surveys conducted in a small sample of urban areas. Although such special surveys would not produce a precise count of the number of homeless people that never use shelters (they may have used shelters in the past), it would provide a reasonably good estimate of the number of homeless who are nonusers of the human-service system. That estimate could be used to develop shelter-to-street ratios, which, in turn, could be used to adjust a utilization-based estimate of the number of homeless chronically mentally ill. As we noted in chapter 2, street-to-shelter ratios vary considerably and more research is needed before they can be confidently applied across time and cities.

Other useful statistical adjustments could be developed from augmenting a statistical reporting system with street surveys. For example, the street survey could be expanded to institutions where the homeless temporarily reside and to settings such as single-room occupancy hotels and welfare motels.[1] Statistical adjustments such as the shelter-to-motel ratio or the shelter-to-institution ratio could be developed. This approach might even be broadened to include a survey of the "precariously housed," which, in turn, could lead to the development of a literally-homeless-to-precariously-housed ratio.

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[1] For the purposes of this study, we have defined welfare motels and hotels as single or multistory motels or hotels (that is, facilities intended for transient or short-term shelter) whose clientele is exclusively or primarily homeless families usually receiving some type of public assistance. These facilities are commercially owned and operated and are often characterized by "poor" physical conditions and services.

Advantages and Disadvantages

This method has all the advantages of option 2 plus a strategy (the street survey) to partially correct for the sampling biases inherent in utilization-based counts.

The option also has all the disadvantages of option 2. In addition, the shelter-to-street ratios developed will be imprecise unless unique identifiers are obtained on respondents in the street survey and cross-matched with shelter respondents. Without unique identifiers, the proportion of respondents in the street survey that have used shelters will be unknown.

Option 4: Social Indicators

An alternative to the nationwide counts of the homeless discussed above would be to study intensively a small number of cities and develop a system of proxy measures of homelessness. The social and economic factors (unemployment, inadequate community resources for the chronically mentally ill, cuts in public assistance, and so on) identified in our report entitled Homelessness: A Complex Problem and the Federal Response (1985) would be candidates for these proxy measures. Surveys using the methodology described in option 1 would be conducted to derive a count—or criterion—against which data on these social indicators could be compared. A prototype of this methodology has been developed by Tucker (1987). He looked at the relationship between a variety of indicators (proportion of the population below poverty, unemployment rate, and others) and HUD's estimates of the number of homeless in cities and found that the size of the homeless population was related strongly to the presence or absence of rent control.

Advantages and Disadvantages

There are at least two advantages to this approach. First, the associated costs would be significantly lower than costs for any of the three options outlined above. Second, once a system of social indicators was developed and validated, it would allow for an assessment of trends in homelessness.

There are also disadvantages to this approach. Social indicator data are indirect and could offer only broad-range estimates of the number of homeless persons. Also, the relationship between a given set of indicators and the size of the homeless population may change over time as the composition of the homeless population changes, so periodic revalidation of the indicators would be needed.

Considerations for Choosing Options: Precision, Use, and Cost

The emphasis in the preceding discussion has been on which of the various options best deals with the biases associated with conducting a survey of the homeless—that is, which of these methods gives us the most precise population estimate. While it is certainly important to choose good methods for an accurate count of the number of homeless chronically mentally ill persons, it is also important to consider the choice of method in relation to how that information will be used. Selection of a method that provides a highly precise estimate when that level of precision is not needed is as much an error in decisionmaking as selecting a method that gives a biased estimate of the number of homeless. In short, the decision about which of the four options to choose should not be made on the basis of precision alone.

Several uses of a count of the homeless mentally ill can be considered. In the early stages of a problem, use could take the form of obtaining a benchmark regarding the extent and scope of the problem. Next, interest in a count might be related to a needs assessment or resource allocation based on identification of need. As programs develop, the potential use for a count might be to monitor the problem, evaluate a program, or do cost-effectiveness or cost-benefit analysis of programs. At some point in time, a count might be useful in reauthorization of legislation. Each count has a level of accuracy or precision associated with it. The empirical limits of precision are largely determined by the method by which the data are gathered and the design of the study. In addition, there are often real limitations on precision dictated by cost considerations. The broader the scope and the more extensive the data collection effort, the higher the costs.

In light of these considerations, we examined several potential uses of a count of the homeless chronically mentally ill in relation to the degree of precision and costs associated with each method. The results of that comparison can be seen in table 4.2. If the purpose of the count were to allocate federal funds to cities across the nation, one might choose the multiple survey method since it can provide a precise count of the number and distribution of the homeless population across cities. Our recent report entitled Homelessness: Implementation of Food and Shelter Programs Under the McKinney Act, GAO/RCED-88-63 (December 1987) concluded that the current social indicator-based allocation formulas used by the Department of Housing and Urban Development and the Federal Energy Management Administration do not necessarily put resources where they are most needed. The higher costs associated with this method might be justified because it is important to target limited dollars where the problem is most severe.

Table 4.2: Appropriate Counting Methods Associated With Potential Use, Precision, and Cost

Appropriate method	Potential use	Precision required	Cost
Multiple national surveys	Establish a benchmark	Moderate	High
Statistical reporting system	Needs assessment and program planning	Moderate	Moderate
Multiple state or local surveys	Allocation or resources	High	High
Local statistical reporting	Program evaluation	Moderate	Moderate
Local statistical reporting with adjustments	Cost-benefit analysis	High	Moderate
National social indicators	Reauthorization of legislation	Low	Low

If, however, the purpose of the count were to aid in the reappropriation of funds for existing legislation for homeless persons, the social indicators method, which can indicate whether the problem is increasing or decreasing, may be the most appropriate. This analysis suggests there are several uses that do not require the automatic choice of a method that gives a highly precise estimate of the number of homeless mentally ill.

The timing of a study in the policymaking process may also influence the level of precision needed by decisionmakers. During early inquiry into the status of a problem, when the intent is to establish a benchmark estimate, a less precise estimate may be all that is necessary. This benchmark figure may be an overestimate or an underestimate of the actual status of the problem, yet it pins down the current situation relative to perhaps a host of perceptions decrying the gravity or insignificance of the problem. As policymakers move into resource allocation based on the estimate, a higher level of precision is required, for here the intent is for equitable distribution of funds based on need. An even more precise count is required when cost-effectiveness or cost-benefit evaluation studies are the intent. When such program comparisons are being made, the accuracy of the count associated with each program is critical in explaining differences between counts arising from differences in programs.

Assessing Trends in the Number of the Homeless Mentally Ill

The strategies we considered for assessing long-term trends of homeless and homeless mentally ill persons build upon the options described above (a brief discussion of the studies that address trends in homelessness is provided in appendix VII). If the statistical reporting system described in option 2 were developed, for example, trend data would be a byproduct of the approach. A second strategy would be to select a subsample of urban areas from the pool of cities selected in a survey of shelters, streets, and institutions and to conduct similar assessments annually.

A third strategy would extend the use of social indicators as discussed in option 4 and develop a multi-indicator approach to assessing change (see GAO/IPE-82-9, Problems and Options in Estimating the Size of the Illegal Alien Population, September 1982). The underlying rationale for a multi-indicator approach is that when the key policy issue is the growth or decline of a social problem (not necessarily its magnitude), relative measures of change are as useful as absolute measures. Applied to the problem of homelessness, if we develop a system of indicators (for example, the number of beds in emergency shelters, number of meals served in soup kitchens, number of single-room occupancy hotels), and each indicator changes in similar directions over time, we would have reasonable confidence that the problem is increasing or decreasing.[2]

Corollary Studies

Counting the homeless on the scale proposed here would provide an opportunity to test empirically a number of innovative methods in enumerating the homeless and the homeless mentally ill. One such method is network sampling. This method involves asking respondents to identify the characteristics of their personal network (for example, number of persons, composition of network, degree of connectedness) and extrapolates from those data to estimate the size and characteristics of populations. Bernard (et al., n.d.) proposed this technique to estimate the number of persons who died in the Mexico City earthquake in 1985. If we applied this to our context, we might attempt to estimate the number of persons who have a zero probability of using shelters by asking shelter residents if they know any nonusers and how many homeless persons they know. This method could be tested by conducting the network sampling and street survey in a small sample of urban areas and evaluating the correspondence between the estimates of nonusers generated by both methods.

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[2] Such changes would, of course, reflect policy shifts. Expanding emergency shelters would attract people who might prefer these to current single-room occupancy hotels; providing low-cost housing for families would decrease emergency shelter use.

Recommendations to the Secretary of Health and Human Services

We recommend that the secretary reexamine the requirements for data collection and evaluation by the states in the Stewart B. McKinney Homeless Assistance Act of 1987 (Public Law 100-77) and direct that the approaches outlined in our analysis be incorporated when administrative data bases are established and as regulations specifying data to be collected by grantees are prepared. These include such issues as a consistent definition of homelessness, specification of the area of coverage, obtaining data on a regular basis so that seasonality can be assessed, and supporting studies that would permit firmer adjustments for street-to-shelter ratios. We further recommend that the secretary take steps to ensure that efforts continue to better define and validly measure mental illness among homeless persons, including an assessment of whether further research support is needed.

Matters for Consideration by the Congress

Continued effort to better define and validly measure mental illness among homeless persons is needed. Our option for deriving precise, national estimates of the number of homeless chronically mentally ill persons (option 1) would require successful completion of such measurement research. However, there is reason now to require the incorporation of improvements in data collection outlined in this report. (See options 2 and 3.) These include the specification of the area of coverage, attention to seasonality, and a consistent definition of homelessness, in a coordinated data system under the Stewart B. McKinney Homeless Assistance Act.

Agency Comments and Our Response

The departments of Health and Human Services, Commerce, and Housing and Urban Development were asked to comment on a draft of this report. The departments of Commerce and Health and Human Services indicated that our analyses were well done and that the report is a useful contribution to understanding how to derive estimates of the number of homeless persons. However, they raised various issues pertaining to our ratings of prior studies, questioned the inclusion of certain studies, and expressed concerns about the feasibility of implementing our recommendations. (The letters received from the three agencies are printed in appendixes X-XII.)

HHS concurred with our recommendation regarding periodic review of progress in measurement and agreed, in principle, with our recommendations concerning data collection. However, it raised several practical considerations and questioned the feasibility of implementing two of our options for counting homeless persons. With regard to the development of statistical reporting systems (options 2 and 3), HHS raised four issues: (1) the Act does not explicitly require the development of a statistical reporting system, (2) there is not enough time to develop and implement such a system, (3) resources and capacities to collect data at state and local levels are limited, and (4) such systems would miss the homeless persons who use nonfederally funded service agencies.

While we acknowledge that the legislation does not specifically mandate the development and implementation of statistical reporting systems to count the homeless or the homeless mentally ill, the act does require data collection activities or annual reports or both. For example title II, section 203(c), states that

> "(1) within 90 days after the date of the enactment and annually thereafter, the head of each Federal agency that is a member of the Council [Interagency Council on the Homeless] shall prepare and transmit to the Congress and the Council a report that describes—(A) each program to assist homeless individuals administered by such agency and the number of homeless individuals served by such programs . . . .

> "Further, title VI (611, adding a new part C-Community Mental Health Services for the homeless to title V of the Public Health Services Act, 42 U.S.C. sec. 290 aa et seq.) indicates that states are required to submit annual reports to the Secretary that contain information that the secretary (after consulting with the Comptroller General) deems necessary to assess the effectiveness of the block grant program for services to homeless individuals who are chronically mentally ill (Section 527)."

With respect to HHS's second point, we agree that the time under the current authorization is too short for developing and implementing a national statistical reporting system. However, if this legislation were reauthorized in 1989, we believe it is appropriate to begin developing data collection plans as soon as possible.

With regard to HHS's third point on state and local capacity, we disagree with the position that is taken. Several states currently have the capacity to collect high-quality data. We do agree, however, that the legislation does not provide additional funding for the development and maintenance of statistical reporting systems and, in that sense, they would place a burden on recipients of federal funds.

Finally, with respect to its fourth point that our proposed information systems would not count some classes of homeless persons, HHS is correct. We identified this as a source of bias earlier in this chapter. Option 3, the statistical system augmented by street surveys, was proposed to account for this source of bias.

In general, we concur with HHS that there are limitations associated with any information-gathering system. Our discussion was intended to provide a systematic review of the available options for data collection as well as a critique of their relative advantages and weaknesses. With such an assessment, informed discussion about information needs, relative costs, and mechanisms for data gathering can proceed.

The Department of Commerce had one major concern about our draft report—it questioned our inclusion of the 1980 census as a source for an estimate of the homeless population. The department clarified that the Bureau of the Census conducted "casual" counts of highly transient persons in various residential and nonresidential settings (shelters, low-cost motels, streets) who could not provide a usual address elsewhere but the Bureau stopped short of designating such persons "homeless." The total figure of 51,000 is officially designated as the number of "persons in low-cost transient quarters." The department argued that since the study was not intended as a count of homeless persons, it should not be included in our review. The Department of Commerce also provided additional technical comments that have been incorporated into the body of this report, where appropriate.

We agree with the Department of Commerce that the 1980 census did not claim to count the "homeless per se." However, while the report did state that the intent of the study was not to count the homeless, the available documentation used the term "homeless" in several sections. Given the new information provided by the Bureau on the casual nature of its count, we concur that the 1980 census data on transients in low-cost quarters should not be included in our analysis.

The Department of Housing and Urban Development indicated that when its study was conducted, it did not have the resources to conduct the type of study that would have satisfied our criteria. Instead, HUD used several methods to provide a range of estimates that it believed were more reliable than those based on a single method. In judging the technical strengths and weaknesses of each study methodology, our concern was focused on the soundness of the methods and the accuracy of the resulting counts or estimates. We agree that the resources available to invest in a study can affect the accuracy of estimates, but we conducted our review without consideration of the resources that were invested. Instead, we focused on the likely accuracy of the values that were presented in prior studies. We have presented a detailed estimate of the likely costs associated with a national probability sample that would meet most of our important criteria (see appendix VIII).

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Study Methodology

To get a clearer picture of the issues and to answer the questions posed by the committee, we used three data sources: literature reviews, case studies, and a panel of experts. The primary data source was the body of studies that have been conducted to estimate the number of homeless or homeless chronically mentally ill persons at the national, state, county, or local levels. These studies were identified through a literature review, evaluated, and subsequently synthesized for their major methodological strengths and weaknesses. Our secondary data source was information gleaned from site visits to Los Angeles, Boston, and Norfolk. During these site visits, we interviewed public officials, shelter providers, and agency directors and visited a number of delivery sites in an effort to understand how cities were determining the scope of the problem, the actual extent of the problem, services being provided, and the degree of public concern regarding the problem. We also used the site visits to sound out our developing ideas regarding ways to improve methods for an accurate count.

Review of Current Studies

This review involved three steps: locating studies, judging their quality, and analyzing the methodological features. For this task, we adapted the evaluation synthesis methodology (U.S. General Accounting Office, 1983).

How We Located Our Studies

We began our location of relevant studies by using broad criteria, including any study that attempted to estimate the number of homeless or homeless chronically mentally ill for any geographic unit of analysis. We obtained the results of a computer-assisted bibliographic search (using DIALOG, SCORPIO, and others) of a number of different data bases—specifically, ABI/INFORM, CITN, Dissertation Abstracts, GAOLIB, Health Planning and Administration, Mental Health Abstracts, PAIS, PSYCHINFO, and Social Scisearch. We recognized, of course, that bibliographic searches would probably not turn up unpublished studies. Consequently, we used two other methods to be sure we had the broadly based coverage necessary to develop our pool of relevant counts. First, we reviewed materials at the Social and Demographic Research Institute, affiliated with the University of Massachusetts in Amherst. The institute has compiled files of studies dealing with issues of homelessness and the chronically mentally ill. Our staff examined these files and cross-checked relevant articles against our developing list.

Second, we sent our preliminary bibliography of 17 studies to approximately 50 persons considered to be knowledgeable from the government, academia, service delivery, and advocacy sectors who are familiar with research on homeless persons and homeless chronically mentally ill persons. We asked them to evaluate our list for completeness and to add studies that gave counts of homeless or homeless chronically mentally ill persons. To expedite this process, we followed up with telephone calls. This yielded 8 additional studies. We also asked our experts if they had any relevant information related to measuring the mental health status of homeless persons, their geographic distribution, and counting hidden populations.

Third, we called the mayors' offices in cities known to have special programs for the homeless. There was a high probability that a count had been conducted in such cities. By speaking with the public official or the researcher most familiar with the homeless, we were able to locate 12 additional studies. Finally, we examined the bibliographies of major reports and articles on homelessness that came to our attention and were not identified in our initial computer search. This effort yielded another 46 articles.

These efforts yielded a total pool of 83 studies, the earliest published in 1975 and the most recent prepared in 1987. We believe this is a comprehensive list of counts developed in this period.

How We Screened the Studies

In defining our universe of studies for the evaluation synthesis, we purposefully kept our inclusion criteria broad. We included any study, regardless of methodological quality, that attempted to estimate the size of the homeless or homeless mentally ill population. We did, however, have some minimum inclusion criteria. Specifically, we included a study in our universe if it met each of the following three criteria:

1. The study was in written form. Telephone conversations, speeches, or conference proceedings without a written product were not included.

2. The study provided a count or estimate (by whatever method) of the homeless or homeless mentally ill persons or assessed trends in a designated geographic area. This would exclude case studies of individuals or studies describing service needs without a count or estimate.

3. The method used to make the estimate of the number of homeless or homeless mentally ill was sufficiently described to permit us to evaluate

its merits (or shortcomings). By "sufficiently described," we mean the study provided some information on

- the data used to make the estimate (for example, expert judgments or actual counts of persons in shelters);
- how those data were collected (for example, shelter-providers were interviewed over the telephone, streets were canvassed by car, and so on);
- how the estimate of the size of the homeless or homeless mentally ill population was actually computed (for example, how shelter and street counts were aggregated). That is, there was some kind of link between the data collected and the final population estimate.

Of our universe of 83 studies, 27 were selected as useful.

How We Assessed the Studies

We next rated the 27 relevant studies on two dimensions: technical quality and soundness (that is, the extent to which the chosen method would produce an underestimate or overestimate of the size of the homeless population). We discovered that many of the studies involved multiple methods for counting the homeless, reflecting the various settings (shelters, streets, institutions) in which the homeless and chronically mentally ill can be found. We considered each of these "nested studies" for how well it met survey methodology standards for soundness. Criteria for methodological soundness encompassed such issues as adequacy of universe definition, coverage of sampling frame, implementation procedures, and soundness of data analysis. We developed and applied a coding form to extract data relevant to these criteria. Finally, two staff members rated the full studies on criteria related to their overall sampling, measurement, implementation, and population estimation procedures.

Sampling Design

- Did the design cover the range of settings where homeless persons were likely to be found (shelters, streets and other public places, institutions)?
- Was the sample of shelters and institutions representative in terms of the area's shelter size (that is, number of beds) and type (public or private)?
- Did the sample of streets and other public places (such as census blocks) adequately cover the locations where the homeless are known to congregate?
- Did the sampling design account for seasonal variation in homelessness?

- Was the unit of analysis (such as municipality) clearly defined?

Measurement

- Was the estimate of the number of homeless based upon an actual count rather than expert judgment?
- Was a respondent's homeless status determined on the basis of screening questions?

Implementation

- Were survey procedures explicitly stated in the report?
- Were interviewers trained to engage with and administer interviews to homeless persons?
- Were instruments pretested?
- If a street survey was conducted, were canvassing procedures consistently applied in areas searched? Were areas enumerated before the actual street survey was conducted?
- If a shelter-and-institutions survey was conducted, was the count based upon administrative records rather than subjective estimates? Were procedures developed to ensure an unduplicated count of the homeless within shelters and institutions?

Analysis and Deriving the Population Estimate

- Was the estimate of the number of homeless based upon a probability sample of areas (such as a national estimate based upon a probability sample of cities)?
- Were adjustments from the sample made to estimate the population (for example, was the application of a shelter-to-street ratio obtained from previous studies) appropriate and justified?

In applying these criteria, we gave a higher priority to the sampling dimension. That is, if a study did not adequately sample the range of settings where homeless persons reside, there was a limit on how high the study could be rated, no matter how strong the measurement, implementation, and estimation procedures. To illustrate, a study that had a strong sampling design (for example, surveyed many settings) but used simple estimation procedures was rated higher than a study that had a weak sampling design (for example, surveyed only shelters) and used sophisticated statistical adjustments to account for the fact that streets or institutions were not surveyed. Accounting for sampling bias by using statistical adjustments—in some cases the only option available—is based on assumptions about the size of the homeless population in the settings not included in the survey, not an actual count. Applying the criteria in this manner, we rated each study's technical quality very high, high, moderate, low, or very low.

Our second rating helped us distinguish where on the technical quality scale (very high to very low) studies could be considered sound enough to provide reliable estimates. The soundness of studies was determined by rating each study on the extent to which its methodology would produce, in our judgment, an underestimate or overestimate of the number of homeless persons. For example, a study that employed a design which relied solely on the estimates of service providers would be rated as having the potential for overestimating the size of the homeless population. Each study was assigned a rating on a 7-point scale that ranged from −3 (serious underestimate) to +3 (serious overestimate). A written justification was given for each bias rating.

To determine a cutoff point for the methodological soundness, we selected studies that received a bias rating of −1, 0, or +1. In addition to providing a cutoff point, this second rating indicates the direction and likely magnitude of the bias in each study.

We used the information from these ratings to get an overview of the current approaches and research designs that are being used to count homeless and homeless chronically mentally ill persons. This information formed the basis for a closer examination of the patterns of strengths and weaknesses that were evident in the various studies and was applied in developing our alternative approaches.

The second step in our evaluation of studies was to assess the approaches used to identify the chronically mentally ill among the homeless enumerated in our studies. We evaluated the various approaches used (for example, history of psychiatric hospitalization, providers judgments, and standardized scales) on the following criteria:

- Were the approaches reliable? That is, Were the approaches consistent? If internal consistency data or test-retest reliability data were presented, were reliability coefficients reasonably high?
- Did the approaches demonstrate concurrent validity? That is, were the measures correlated with other indicators of chronic mental illness? For example, did persons scoring high on a symptom scale of psychosis also have a history of psychiatric hospitalization?
- Did the approaches assess duration or periodicity of mental illness? For example, were respondents asked about how long their reported symptoms had been present?

- Did the approaches distinquish the potential effects of life in shelters and on the streets from bona fide mental illness? For example, were items reworded to reflect the unique circumstances of life in the shelters and on the streets?
- Were the approaches feasible for a survey-based prevalence study? For example, could the survey be administered by lay interviewers in not more than 30 to 40 minutes?
- Did the approaches minimize observer bias? For example, did the approach use standardized criteria and respondents self-reports to identify the chronically mentally ill?

How We Synthesized the Data

In this final stage of our review of the studies, we looked for patterns that emerged across the various approaches being used to count the general homeless population. We compared information across studies to identify the various strengths and weaknesses of the current studies. This work was conducted in September 1987 through December 1987.

The Three Case Studies

When we were reviewing relevant studies, we also conducted case studies in Los Angeles, Boston, and Norfolk. Information gathered from interviews and site visits in each of these studies helped us examine approaches to counting homeless mentally ill from the perspective of local evaluators and service providers.

The three cities were selected from a pool of approximately 33 cities. We attempted to visit a "best case" and "worst case" city in an effort to capture the total range of problems, issues, and service delivery concerns in meeting the needs of homeless and homeless chronically mentally ill persons. The criteria with which we selected our three cities included poverty level, per capita spending on mental health, size, receipt of funding for assisting the homeless (such as from the National Institute of Mental Health and the Robert Wood Johnson Foundation) and geographic location.

These case studies were conducted during the summer months of 1987. Two of our staff members interviewed public officials, health personnel, mental health personnel, public agency personnel (welfare, social services, housing authorities) and visited service delivery sites (shelters, intake facilities, family shelters). We discussed specific problems in regard to getting an accurate count and the ideas of persons we interviewed regarding appropriate methods for a more accurate count.

How We Developed Our Alternative Approaches

To assess the improvements that could be made to the current approaches, we used the results from our review of current studies, our discussion with experts, and the information from our case studies. From these data, we developed four options. These options considered use of the data, cost, ability to generalize, relevance, and time for implementation.

Panel of Experts

To further examine our analyses and options, we convened a panel of four experts in the fields of methodology, sampling, mental health diagnosis, and meta-analysis. Their primary task was to critique and, if possible, arrive at consensus regarding specific components of the approaches. This panel met in late September 1987. Our panel of experts is listed in appendix III.

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Appendix IV

Summary of Studies Counting the Homeless

Study	Geographic region surveyed	General approach	Specific design	Definition
Adult Residential Care Advocates (1984)	Erie County, N.Y.	Expert judgment	Human service agency personnel interviewed; estimated the annual prevalence of homelessness	Persons without housing whatever the reason
Baumann et al. (1985)	Austin, Tex.	Survey or census	Surveyed streets in downtown Austin	Persons who reside at night in emergency housing shelters or in public or private places without official permission
Brown et al. (1983)	Phoenix, Ariz.	Survey or census	Enumerated homeless in shelters, food lines, voucher motels, urban camps, and transient aid center	Not explicitly defined
City of Boston (1986)	Boston, Mass.	Survey or census	1-night count of shelters, public places, hospitals, and detoxification centers	All persons believed to be homeless
City of Boston Emergency Shelter Commission (1983)	Boston, Mass.	Survey or census	1-night count of shelters, hotels, institutions, police stations, and streets	Not explicitly stated but included persons in shelters, police stations, institutions, and hotels and on streets
California Department of Housing and Community Development (1985)	California	Expert judgment	Telephone interviews with shelter operators and local officials	Persons on streets seeking shelter with no alternative but emergency shelters, voucher hotels, or public places not designated for shelter; excluded living with friends
Cleghorn (1983)	Birmingham, Ala.	Expert judgment	Interviews with service providers, police, social workers	Persons in shelters and on streets—i.e., the chronically homeless
Cowan et al. (1986)	Baltimore, Md.	Data on use	Examined shelter records in each of 4 months	Persons using shelters
Darcey and Jones (1975)	Sydney, Australia	Survey or census	Surveyed shelters and institutions at 3 points in time	Not explicitly stated
Freeman and Hall (1987)	New York City	Survey or census	Survey of a sample of emergency shelters, welfare hotels, and streets in New York City, extrapolated to the nation	Not explicitly stated but apparently persons who live in shelters or on streets

Mental health measured	Population estimate obtained	Time period covered by estimate	Date	Estimated number of homeless
Yes	Aggregated respondent estimates of number of homeless	1 year	1984	5,250-6,000
Yes	Simple unduplicated count of street persons; adjusted raw total (565) upward by 13 percent to account for "hidden" homeless	1 month	August 1984	638
Yes	Aggregated counts from sites surveyed; adjusted for known duplication in count	3 weeks	March 1983	1,813
No	Aggregated shelter, street, and institution counts	1 night	September 1986	2,863
No	Aggregated shelter, institution, hotel, and street count	1 night	October 1983	2,767
No	Totals reported by key informants and adjusted using data from site visits and estimates in application for shelter grants	1 night	Not mentioned	50,000-75,000
No	Aggregated total number of shelter beds with expert estimates of number of street homeless	1 night	1983	285
No	"Capture-recapture" techniques	1 month	August and November 1985 and February and May 1986	874, 1,022, 959, 897
No	"Capture-recapture" techniques	1 night	June and October 1971 and March 1972	3,200
No	Street-to-shelter ratio based on self-reports of shelter use and applied to adjusted HUD estimates of number of sheltered homeless and authors' estimate of welfare hotel use	1 night	Summer 1985	279,000 in the nation (1983 estimate); 343,000-363,000 (1985 estimate)

(continued)

Study	Geographic region surveyed	General approach	Specific design	Definition
Gist and Welch (1986)	Kansas City, Mo.	Data on use	Survey about use of all shelter and selected transitional facilities personnel	Persons who reside at night in emergency shelter or public places without permission
Goplerud (1987)	Fairfax County, Va.	Survey or census	1-night census of shelters and institutions	"Literally homeless" persons with no roofs and temporarily in shelters
Hamilton, Rabinovitz, and Alschuler (1986)	Skid Row, Los Angeles, Calif.	Survey or census	Single survey of homeless in shelters, missions, public places; probability sample of streets	Adults 18 years and older who usually sleep in places other than residential hotels, apartments, or houses
Health and Welfare Council of Central Maryland (1986)	Maryland	Data on use	Mail survey of shelter providers and other knowledgeable persons; Delphi technique to estimate number of "unserved homeless"	Persons in public or private emergency shelters (including voucher-funded short-term residential settings) or any public or private spaces not designated for shelter
Hombs and Snyder (1983)	Nation	Expert judgment	Telephone survey of 100 agency personnel in 25 cities	Self-determined need for shelter
Homeless Task Force (1986)	Indianapolis, Ind.	Survey or census	1-night census of private not-for-profit shelters	Persons living in shelters, with relatives or friends, in single rooms, in lockups, and on streets

Mental health measured	Population estimate obtained	Time period covered by estimate	Date	Estimated number of homeless
No	Aggregated daily and annual estimates of use corrected for duplication using aggregated estimates of duplication and transience	1 year	January 1985	3,985-5,810
Yes	Aggregated shelter, institution, and street counts; projected annual prevalence	1 night	March 1987	612
No	Aggregated weighted estimates of homeless in shelters, public places, and block sides	1 average night	October 1986	1,900
Yes	Aggregated shelter-provider estimates of number of sheltered homeless with expert estimates of number of unserved homeless (weighted for vulnerability)	1 night	Not available	2,900
No	Aggregated expert estimates	1 night	Not mentioned	2.2 million
No	Aggregated shelter census data with estimates of number of street homeless and marginally housed	1 night	October 1986	1,546

(continued)

Study	Geographic region surveyed	General approach	Specific design	Definition
HUD (1984)	Nation	4 approaches (core approach expert judgment)	(1) Compiled published estimates from 37 local cities; (2) surveyed experts in a probability sample of metropolitan areas; (3) surveyed shelter operators in probability sample of metropolitan areas; (4) combined estimate of shelter count with published street counts	Persons who at night reside in emergency shelters or public or private space not designated for shelter
LaGory et al. (1986)	Eight metropolitan areas	Survey or census	1-night census of shelters and streets	Persons whose nighttime residence was in shelters, on the street, or in other public places
Luke (1986)	Omaha, Douglas County, Neb.	Survey or census	1-night census of shelters, streets, institutions, and welfare motels	Persons in public and private shelters, motels, jails, hospitals
Lundy and Kalob (1985)	New Orleans, La.	Expert judgment	Interviewed service providers and others	Not explicitly defined but anyone seeking service from shelters and soup kitchens
Mental Health Association of Greenville County (1986)	Greenville County, S.C.	Survey or census	Survey of shelters	Persons who reside in shelters at night; persons using agencies for the homeless during the day

Mental health measured	Population estimate obtained	Time period covered by estimate	Date	Estimated number of homeless
Not in approaches 1, 2, and 4; yes in 3	(1) Computed rate of homelessness for metropolitan areas covered by estimates; applied rate to nation's population; (2) computed homeless rate for 60 metropolitan areas using weighted expert estimates; estimated nonmetropolitan rate; applied rates to nation's metropolitan and nonmetropolitan population; (3) computed homeless rate for 60 metropolitan areas, estimated nonmetropolitan homeless rate; (4) added 2 street count estimates from (a) previously published local studies and (b) census casual count to estimated number homeless	1 average night	Winter 1984	(1) 586,000; (2) 254,000; (3) 353,000; (4a) 192,000; (4b) 267,000; most reliable range 250,000-350,000
Yes	Aggregated shelter and street counts with hotel single-room occupancy (SRO) in Birmingham only; adjusted shelter counts in other metropolitan areas with street-to-shelter and SRO-to-shelter ratios	1 night	February 1987	1,645
No	Aggregated shelter, motel, and institution count	1 night	March 1986	331
Yes	Aggregated informant estimates	1 night	April 1985	1,200-2,000
Yes	Aggregated daily count	3 days	February 1985	201, 203, 207

(continued)

Study	Geographic region surveyed	General approach	Specific design	Definition
New York State Department of Social Services (1984)	New York	Data on use	Persons representing shelters, police, and welfare agencies estimated the average nightly census	Anyone temporarily or permanently without shelter
Robinson (1985)	Washington, D.C.	Survey or census	1-night survey of shelters and streets	Persons in shelters or on the streets and in institutions
Rossi et al. (1986)	Chicago	Survey or census	Probability sample survey of shelters and streets conducted in fall and winter	"Literally homeless" persons who do not have customary and regular access to conventional dwellings
Wiegand (1985)	Nashville, Tenn.	Survey or census	Surveyed shelters, streets, and institutions on 1st day of each season	Persons sleeping in shelters, streets, jails, excluded doubled and tripled up
Winograd (1983)	Pittsburgh, Pa.	Expert judgment	Knowledgeable persons were asked to estimate the number of homeless on the streets, experts estimated number of transitionally needy and economically associated	Persons with no bed to sleep in indoors and others at risk of homelessness
Woods and Burdell (1987)	Cincinnati, Ohio	Survey or census	Counted number of persons seeking shelter during 1 month	Not explicitly stated but includes those who seek shelter and persons on streets and in other public places

Mental health measured	Population estimate obtained	Time period covered by estimate	Date	Estimated number of homeless
Yes	Aggregated respondent estimates, applied street-to-shelter ratio from Boston and Pittsburgh to 5 urban counties; computed per capita rate and number of unsheltered homeless in nonurban counties; added urban and nonurban estimates	1 average night	May 1984	44,066-50,362
No	Aggregated data on use from shelters with street and shelter count, adjusted street count upward (multiplied by 2.5) to estimate number of "concealed homeless"	1 night	July 1985	2,562-6,454
Yes	Aggregated weighted shelter and street counts, adjusted with estimates of number of children temporarily housed, institutionalized homeless and homeless in excluded shelters	1 average night	September-October 1985 and February-March 1986	2,344 fall, 2,020 winter, final estimate 2,722
No	Aggregated street, shelter, and institution counts	1 night	Spring 1984, summer 1985, fall 1984, winter 1984	836, 689, 821, 820
No	Aggregated informant estimates, adjusted for duplication in street survey	1 night	Summer 1983	1,489
No	Computed on unduplicated count, adjusted upward to account for nonservice seekers and turnover in two subgroups: extended and temporary homelessness	1 year	1986	9,526-11,454

Summary of Shelter and Institution Surveys

Study	Type of shelter
Brown et al. (1983)	Individual and family shelters, transient aid center, charity-sponsored motels
City of Boston (1986)	Municipal shelters, hospitals, detoxification centers
City of Boston Emergency Shelter Commission (1983)	Shelters, detoxification centers, mental health center
Darcey and Jones (1975)	Hospitals, hostels, rehabilitation farms, psychiatric centers
Freeman and Hall (1987)	Women's and men's emergency family shelters, welfare hotels
Goplerud (1987)	Emergency shelters, substance detoxification centers, public psychiatric hospitals, general hospitals, jails and detention centers
Hamilton, Rabinovitz, and Alschuler (1986)	Missions and shelters on Skid Row
Homeless Task Force (1984)	Emergency shelters
LaGory et al. (1987)	Shelters and missions, domestic violence shelters, halfway houses, runaway shelter
Luke (1986)	Emergency shelters and institutions
Mental Health Association of Greenville County (1986)	Shelters, detoxification centers, hospitals, jails, community centers, detention centers, churches, police departments
Robinson (1985)	Municipal shelters, hospitals and police stations, psychiatric hospitals
Rossi et al. (1986)	Emergency shelters
Wiegand (1985)	Jails, Union Rescue Mission, Salvation Army, and other short-term shelters
Woods and Burdell (1987)	Emergency shelters for individuals and families, other special-purpose shelters for teenage runaways, parollees, substance abusers, and the mentally ill

Sample or census	Sampling strategy	Date source	Who conducted the count	Data
Census	—	Actual count	Researchers	March 1983
Census	—	Service-provider reports	Shelter providers	September 30, 1986
Census	—	Census figures	Shelter providers	October 27, 1983
Census	—	Records and staff reports	Researchers and providers	March, June and October 1971 and 1972
Sample	Purposive	Actual count	Researchers	Summer 1985
Census	—	Actual count	Researchers	March 1987
Census	—	Actual count	Researchers	October 1986
Census	—	Actual count	Shelter providers	October 1986
Census	—	Actual count	Shelter provider	February 1987
Census	—	Actual count	Shelter providers	March 1986
Census	—	Actual count	Service providers	February 14-16, 1985
Census	—	Records and provider reports	Shelter providers, hospital and law enforcement personnel	July 1985
Sample	Shelters drawn with probability proportionate to size	Records (sign-in sheet)	Shelter operators	Fall 1985, winter 1986
Census	—	Actual count	Researchers	Winter 1983 and spring, summer, and fall 1984
Census	—	Actual count	Shelter providers	March 1986

Appendix VI

Summary of Street Surveys

Study	Area surveyed	Sampling strategy	Site selection
Baumann et al. (1985)	Downtown Austin, Tex.	Purposive	Informants designated known habitations
Brown et al.	Downtown Phoenix, Ariz.	Purposive	Identified by researchers
City of Boston (1986)	Boston, Mass.	Purposive	Key informants identified streets and other public places
City of Boston Emergency Shelter Commission (1983)	City of Boston and surrounding neighorhoods, Mass.	Purposive	Informants designated known habitation sites
Freeman and Hall (1987)	New York City divided into 5 areas	Purposive	Identified by researchers
Goplerud (1986)	Fairfax County, Va.	Purposive	Informants identified streets and other public places where homeless were known to congregate
LaGory et al. (1987)	Downtown Birmingham (300 block area), La.	Purposive	Identified by researchers
Hamilton, Rabinovitz, and Alschuler (1986)	Skid Row, Los Angeles, Calif.	Purposive sample of public places; two-stage probability sample of streets (block sides)	Informants identified public places; block sides stratified and selected randomly
Luke (1986)	Downtown Omaha, Neb.	Purposive	Identified by research staff
Robinson (1985)	Washington, D.C.	Full enumeration	Identified by researchers
Rossi et al. (1986)	City of Chicago, Ill.	Probability sample	Census blocks stratified by probability of encountering homeless; blocks then randomly selected
Wiegand (1985)	Downtown Nashville, Tenn.	Full emumeration of 20-block downtown area	Areas selected by a coalition of researchers and advocates for homeless persons

Street and other public places	Degree of area coverage	Presurvey enumeration of streets	Basis for determining homelessness	Time of day
Targeted streets and other places	Moderate	Yes	Answers to screening questions	Daylight hours
Transient camps and food lines	Low	Not mentioned	Appearance and location	Not mentioned
Streets, sidewalks, on subways and trains and at stations, alleyways, cars, airport terminal, hospital waiting rooms, and other semipublic places	Moderate	Yes	Appearance and location	9 p.m.-12:00 midnight
Streets; parked cars, bus, train, and subway stations; alleyways, doorways, vacant lots; airport terminal; hospital waiting rooms, park benches and abandoned buildings	Moderate	Not mentioned	Appearance and location, screening questions if feasible	9:00 p.m.-7:30 a.m.
Streets, parks, soup kitchens, food lines	Low	Not mentioned	Appearance and location	Not mentioned
Abandoned houses, cars, soup kitchens, all-night doughnut shops, under or behind stairs, behind churches, lean-tos, tents, streets, alleys	Moderate	Yes	Appearance and location	11 p.m.-2 a.m.
Streets, alleys, bridges, bus stations and lobbies of accessible public buildings, parking decks and garages, jails, railroad box cars, abandoned cars and trailers, parks and thickets, overpasses under bridges, passage ways, all-night restaurants	Moderate	Not mentioned	Appearance and location	3:00 a.m.-5:00 a.m.
Parks, bus stations, block sides adjacent to all-night movies, bars and liquor stores, alleys, doorways	High	Not mentioned	Answers to screening questions	Daytime and nightime hours
Streets, railroad yards, under bridges, bus stations, alleys, viaducts, overpasses, riverside, abandoned buildings and vehicles, doorways, alcoves, loading docks, parks	Moderate	Not mentioned	Appearance and location	9:00 p.m.-11:00 p.m.
Abandoned buildings, parked cars, parking lots, bus, subway, and train stations, parks, alleys, roof tops, garages, sidewalks, vacant lots, and construction sites, doorways	High	Not mentioned	Appearance and location	9:30 a.m.-3:30 a.m.
Abandoned buildings; all-night movie houses, subway, train, and bus stations, doorways, alleys, restaurants, parked vehicles, bars, open basements, roofs, airports, any public place	High	Yes	Answers to screening questions	1:00 a.m.-6:00 a.m.
Alleys, abandoned buildings, abandoned cars, streets, makeshift camps	High	Yes	Appearance and location	3:30 a.m.-6:00 a.m.

Appendix VII

Appropriate Trend Data

Available Trend Data and Their Quality

We found little trend data regarding actual counts of the homeless and homeless mentally ill. Few cities have conducted more than one count of these populations. We did notice concern with trends appearing as descriptions of demographic changes in the general homeless populations and more concerted efforts to document trends through growth in number of shelter beds or percentage change in the number of homeless persons. Significant improvement could be made in documenting and reporting trends.

Definition of Trend Data

Before we could assess the studies looking at trends, we had to define what we meant by "trend." Trends in homelessness and mental illness imply changes over time. We saw at least two relevant issues. First is the question of whether a reported change is an actual change in the number of persons or just a description of a new pattern in the population. In our review of original studies, we noticed attention being given to describing changes in the homeless population, such as how a particular population is becoming younger or increasing in its number of women and children (Partnership for the Homeless, 1987; U.S. Conference of Mayors, 1987). These descriptive data of patterns, while important for planning, did not seem directly relevant to our study, focusing on counts, unless numbers of persons were indicated. Thus, we do not discuss these descriptions of demographic changes.

The second issue relates only to counts—namely, the period of time the data cover. Some of the reports collected data at several points in time within the same year. We did not consider these data to be trends, since their purpose is primarily to monitor seasonal changes within the same year. Our definition of trend data refers to changes in the size of the homeless clinically mentally ill population over time in numerical data across years.

Two Approaches

In our initial screening of studies, we looked for both counts and trends, in view of the congressional request. We noticed two approaches being used to look at changes over time. First, actual counts of the homeless were taken at multiple points in time and compared over time. Second, a measurement of the change was estimated. For example, one might ask, By what percentage is the number of homeless persons increasing or decreasing within a specified time period such as 1 year? Or how do the numbers of homeless persons change over time? It is with these two approaches to trends that we screened studies.

We also recognized that some studies had as one primary purpose to enumerate or determine seasonal fluctuations in the homeless population, whereas other studies were more interested in monitoring changes in the homeless population and homelessness problem over time. We developed, in a sense, two groups of trend studies to coincide with these observations. The first group met our criteria for the evaluation synthesis, because they actually came up with a final count or estimate of the number of homeless or homeless mentally ill persons. The second group of studies did not count or estimate the number of homeless persons but did provide some trend data—for example, the percentage increase in the number of homeless persons over the past year.

Counts

Among the 27 studies in our synthesis, 8 gathered data or reviewed data for multiple points in time. This fact, in and of itself, is revealing, in that few studies that represent actual counts have looked at the homelessness problem over time. Detailed review of these studies shows us even more about how multiple measurement points are used. In 4 of these 8 studies, the purpose of taking multiple measures was to capture seasonal or monthly variations rather than to look at long-range trends. The multiple measures were all taken within 1 year or less.

Because of seasonal or monthly variation in the nature of homelessness, these data really reflect only climatic factors or cycles of financial assistance adding to the severity of the problem. Our evaluation of these studies is that they are not true trend studies but, rather, studies controlling for seasonal or other short-term variation in order to get a more accurate view of the problem annually.

Changes

The second group of studies looked at changes in the extent of the homelessness problem over time, usually annually. These studies present their findings in basically one of two ways. The first way is to present annual figures of some measure of homelessness—for example, the shelter population. The City of Boston (1986) presents data comparing a 1-night census conducted in 1983 with one conducted in 1986. One can see a continual increase in each of the subpopulations and the total shelter population.

The second presentation of findings largely involves estimates of the expected increase or decrease in the number of homeless in the forthcoming year. Two examples of this type are the annual study by the Partnership for the Homeless (1986) and the U.S. Conference of Mayors

(1987). In the former study, a mail survey is completed annually by a growing list of interested shelter providers and caretakers of the homeless around the nation. Questions are asked in terms of how much the problem has increased and decreased, in addition to the perceptions and opinions of these providers. The latter study includes the opinions from 25 mayors from around the country. The survey used in this study asked mayors' offices to estimate the expected growth of the homeless population in their respective cities for the next year.

In both of these approaches, the percentage change from current status is being estimated. While these data may be especially useful in terms of advocacy for needed resources and program planning, these methods do not provide actual counts of the number of persons involved. There is simply general agreement that the problem of homelessness is on the increase.

Our conclusion is that trend data are based on largely subjective estimates by providers and public officials rather than objective studies.

Options for Counting the Homeless Mentally Ill: Designs and Costs

Option 1: A National Survey

An estimate of homeless mentally ill persons could be developed from a national sample of homeless individuals who have been screened for chronic and serious mental illness. Such an approach would involve identifying homeless individuals through surveys conducted in a probability sample of urban areas. The unit of analysis could correspond closely to urban areas that contain most of the nation's population. The surveys could enumerate or estimate the number of homeless in each of the four different types of places where the homeless are likely to be: in the shelters, in the streets, in public places other than the streets, and in various public institutions likely to pick up the homeless and the indigent. The resulting sample counts of homeless mentally ill persons could permit generalization nationally to urban areas. It is, however, limited by uncertainties regarding the assessment of mental illness in this population. Rural areas are not included in the sample design described here because of the significant increase in costs associated with surveying those areas.

Four Separate Counts Within Each Community

It might be convenient in each of selected communities to collect data in four separate surveys. That is, there might be one survey of the shelters for the homeless; one of other institutions where the homeless might be found, such as jails or emergency rooms; one of public places; and one of parks, arcades, and the city streets or blocks.

These distinctions are important, because each type of place has certain conditions associated with it that affect the sampling error and selection procedures as well as the data collection arrangements. For example, in a typical city, there may be only a dozen shelters and a dozen other types of institutions where homeless persons can be found. But there are likely to be fifty public places, a few hundred establishments, and thousands of city blocks. Also, the chances of finding a homeless person vary from near certainty for a place such as a shelter to near zero for a place such as a suburban residential block. Furthermore, the shelters, other types of institutions, and public places are generally confined to certain parts of the city while the streets cover the entire sampling domain. Hence different data collection site access plans should be developed to canvas efficiently each type of location.

We think the city surveys should be implemented in the various cities at different times of the year. For example, the cities could be surveyed during the months of November through July. This would allow compensation for seasonal variations on a national basis by randomizing the assignment of season. A subsample of cities could be under study during any given month. The within-month assignments could be made in a counterbalanced triad to account for the seasonal-regional interaction.

Proximity in Time

All four surveys within each city should be implemented within a 2-week period. The objective of the data collection is to develop a credible 1-night count. With the help of interview information, weekly, monthly, and annual counts could also be extrapolated. The counting operation should be conducted during the nighttime sleeping hours. Each likely homeless person would be encountered, screened, and interviewed. We believe that all cooperating participants should be paid for their screening and interviewing participation.

To minimize the duplication of counts, two additional steps could be taken. First, all participants should be enumerated with a code such as the second letters of their first and last names plus the birthdays. Second, all sweeps of streets, shelters, public places, and institutions could start simultaneously from the same general geographic location.

Sweep Plans

Sweep plans could identify the places in each community where the homeless are likely to be found. Usually the homeless are concentrated in specific areas. The areas would be determined in consultation with knowledgeable city officials, police, and welfare, shelter, and outreach workers. The more accurate identification of high-density areas for the homeless, the less the sampling error.

For safety's sake, the street and public-place sweeps should be conducted with two-person teams consisting of an interviewer and a local, off-duty, armed police officer. However, while the officers should be trained in the survey procedure, they would not be part of the interview and would maintain a sufficient distance within sight to afford both privacy and protection.

The Sample-to-Interview Ratios

The shelter survey is the easiest to implement because there are a limited number of shelters and almost everyone residing in a shelter is likely to be homeless. Hence, the data collection protocol might specify that all shelters be selected, all clients be counted, and one in four be interviewed. This ratio could be increased or decreased somewhat, depending on whether the shelter is very large or very small.

For the nonshelter institutional survey, the ratio of those selected for interview might be different. Since in some cities there may be a limited number of emergency rooms, mental health centers, psychiatric and general hospitals, welfare offices, warming centers, soup kitchens, jails, and other places likely to pick up the homeless, one might go to them all and screen or interview every potential participant for homelessness. In some large cities, the design might call for sampling these institutions, by taking every other one or a set number, say 20, 25, or 30, depending on the number of institutions.

The public-place and public-establishment survey is likely to require a mixed strategy or both one- and two-stage sampling strategies. For instance, in moderate to small cities, one could sample all the public places, bus terminals, parks, bridges, and the like and screen or interview all potential participants in these places. However, for establishments, arcades, all-night movie houses, bars, and so on, a more cost-effective strategy could be to interview all potential participants either in one of every four such places or in a set number of places selected at random, say from 20 to 30.

The street survey would almost always require a sample of streets or city blocks and public places (such as parks). That is, the plan would call for a sample of blocks or perhaps the block faces and interviews of all potential participants on the streets, alleys, and open or abandoned buildings located in these block or block faces. The street survey would be the most difficult and expensive part of the study, because of the large area to be covered and because of the careful prior analysis required. Since in the universe of city blocks homelessness is relatively rare, as noted earlier, it is almost essential to identify, prior to sampling, the locations where the homeless are likely to be. Hence, like the public-place survey, the sampling domain of city blocks would have to be stratified into categories likely to contain the homeless and those where homelessness is unlikely.

The sampling strategy is likely to require a random sampling of city blocks. We estimate that street sweeps cover between 1,000 blocks per city in our largest stratum of cities and 306 blocks per city in our smallest strata of cities.

Selecting the Communities

It is likely that an efficient and realistic or credible strategy for selecting the communities would be a stratified random sample of cities. Cities would be grouped into five strata by population: 1 million or more;

500,000-999,999; 250,000-499,999; 100,000-249,999 and 50,000-99,000. Overall, the cities included in these strata account for 66 percent of the nation's people.

Costs

The costs of this national survey of homeless mentally ill persons were computed by using a cost optimization approach similar to that developed by the National Opinion Research Center. While there are many uncertainties associated with deriving an appropriate sample design, we believe a reasonable cost estimate—with a sampling error of plus or minus 5 percent—is $6.2 million.

Option 2: Statistical Reporting System

To estimate the costs of this option, interviews were conducted with several individuals who were involved in the development, administration, or maintenance of similar national reporting programs. Information was collected on the costs of three existing reporting systems: the Youth Information System, administered by the Family and Youth Services Bureau of the Administration for Children, Youth, and Families; the Health Care for the Homeless tracking system developed by the Social and Demographic Research Institute; and the National Reporting Program of the National Institute of Mental Health.

Given our analysis of these statistical reporting systems, we estimate the one-time cost of developing and testing a national statistical reporting system (involving 1,000 sites) to track homeless mentally ill persons would be approximately $1.3 million. This cost would depend on the degree to which these systems have already been developed. The annual costs of this system would be approximately $650,000.

Option 3: Statistical Reporting System Supplemented With Street Surveys

The costs associated with supplementing a statistical reporting system with street surveys were computed by adding the costs associated with option 2 (annual costs only) and the cost of conducting the survey described in option 1 in a small number of cities. The total cost would of course depend on the number of cities selected. Assuming two cities from each stratum were selected, we estimate the total cost of option 3 at $1.3 million. When development costs are added (from option 2) in the calculation, the total cost would be $2.6 million.

Option 4: Social Indicators

We were not able to derive a specific cost estimate for the social indicators option. We believe such a system would be less expensive than option 2 because individuals would not have to be tracked or monitored over time and extant data could be used.

Summary of Case Studies

Topic	Boston, Mass.	Los Angeles, Calif.	Norfolk, Va.
Presence of counting	Boston Emergency Shelter Commission 1983 and 1986	Hamilton et al. count of Skid Row area (1986)	No counting
Number of homeless	Boston Emergency Shelter Commission: 2,767 (1983), 2,863 (1986)	Rabinovitz et al., 1,900 on Skid Row (1986); Skid Row Mental Health guesses 12,000 homeless in Los Angeles	Rough guess 3,000-3,700; 1,800 chronic; basis apparently 1 percent of general population (282,000)
Number of homeless mentally ill		Skid Row Mental Health guesses 3,000 in Los Angeles	Rough guess 360
Presence of tracking system	No coordinated tracking; problems tracking mentally ill between 6 catchment areas in greater Boston; proposed system for 1990	Los Angeles County Dept. of Mental Health computer system tracks biostatistical and service data; keeps direct service, case management, and indirect community service	Mental health can be counted only manually and does not track homeless persons. Church social ministries provide a centralized computer tracking system including person, date of request, aid requested, aid received, agency approached, agency meeting request. System serves as clearinghouse and checkpoint to keep clients honest and to enable agencies to share confidential information otherwise not available. The system lists more than just homeless persons; public health tracks clients with state and local hospitalization program. City task force is considering coordination, prevention, and tracking needed to decrease high users thought to be indigent and largely homeless
Unduplicated counts capability	No formal capability	Can track individual cases by service and biostatistical variables	Church social ministries computerized tracking system is maintained by individual names, including aliases
Entry points for counting	Plans to start street outreach; Boston health link provides health services through streets, shelters, and referrals	Enter as case through county if a mental health problem and through city if a housing problem; street teams try to get services for homeless persons; health care for homeless provides services and referrals	Mental health case management system follows assigned clients through all community delivery systems; prescription team assigns clients to agencies; two outreach teams in dept. of mental health
Coordination of services	The state executive office of community development and executive office of human services coordinate programming; no formal mental health dept. relationship with shelter system	Fragmentation of service delivery; agencies work independently; coalitions for homeless exist with varying effectiveness; staff in each Supplemental Security Income processing office help process homeless	Use of "prescription team" (or interagency group) to assign clients to primary agency for care; no formal mental health relationship with shelters

(continued)

Topic	Boston, Mass.	Los Angeles, Calif.	Norfolk, Va.
Unique problems regarding counting	Mental health dept. clients have gotten lost being shuffled between catchment areas; not everyone who appears homeless is homeless	Questioned need to expand definition of homeless to include "cyclical homeless" or "precariously housed"; many homeless and mentally ill are shy of traditional services and do not want to be counted; dual disorder (substance abuse and mental problem) is difficult to diagnose	Large numbers of homeless are women and children associated with military personnel and are both literally homeless and precariously housed, the latter being hard to count; multiple contacts for help or circular referral between agencies may inflate perception of number of people in trouble; reliance on shelter count in cities with few shelters underestimates the numbers, if there is a sizable street population
Counting approach suggested	Use-based count would be reasonably good estimate because of extensive shelter system; providers, officials, advocates, and others are all involved when counting	Use-based count would greatly underestimate number of homeless	Need to count persons in shelters, street people, and those turned away; use-based count would underestimate numbers because of so few shelters; distinguishes between episodic and chronic homeless

Comments From the Department of Health and Human Services

Note: GAO comments supplementing those in the report text appear at the end of this appendix

DEPARTMENT OF HEALTH & HUMAN SERVICES

Office of Inspector General

Washington, D.C. 20201

MAR 25 1988

Mr. Lawrence H. Thompson
Assistant Comptroller General
U.S. General Accounting Office
Washington, D.C. 20548

Dear Mr. Thompson:

Enclosed are the Department's comments on your draft report, "Homeless Mentally Ill: Problems and Options In Estimating Numbers and Trends." The enclosed comments represent the tentative position of the Department and are subject to reevaluation when the final version of this report is received.

The Department appreciates the opportunity to comment on this draft report before its publication.

Sincerely yours,

Richard P. Kusserow
Inspector General

Enclosure

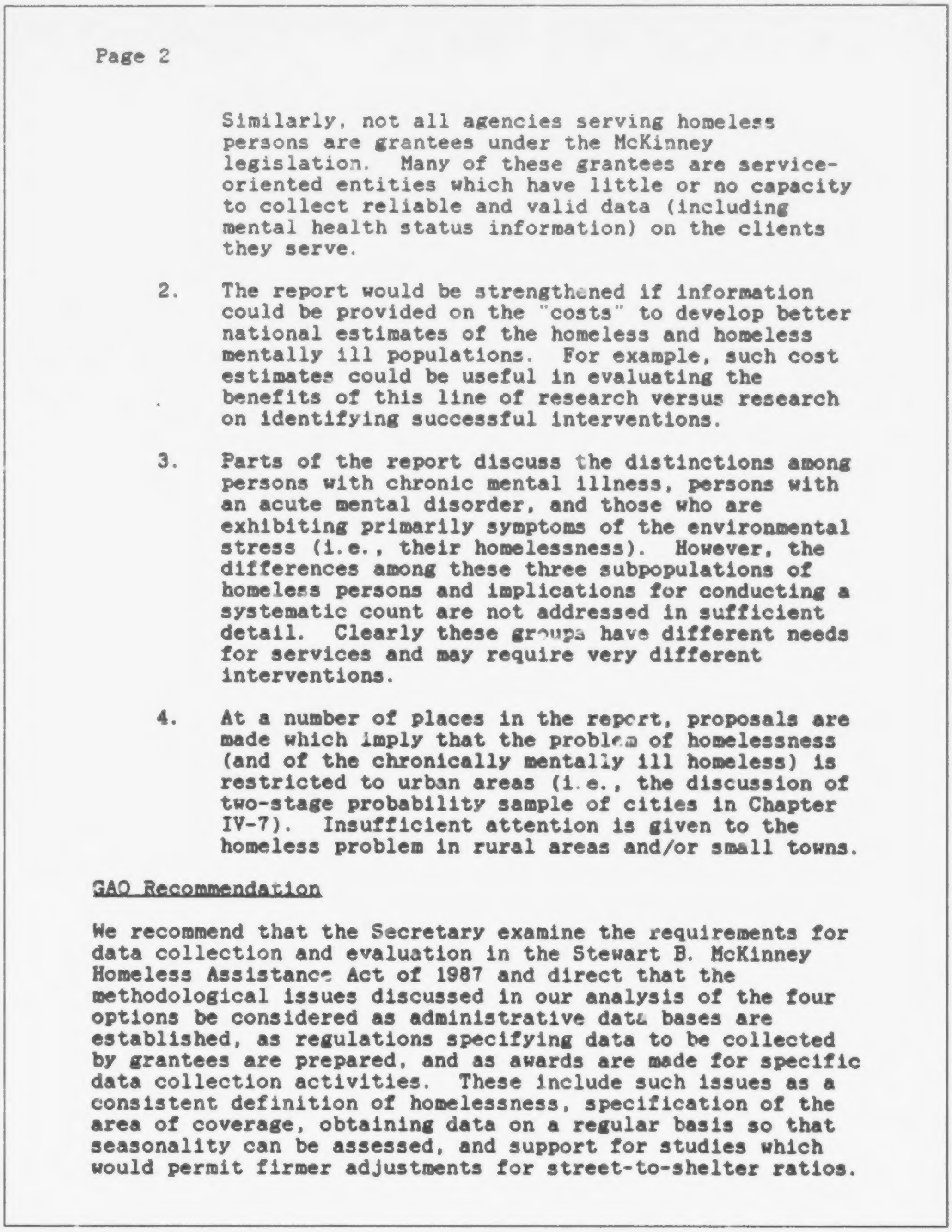
COMMENTS OF THE DEPARTMENT OF HEALTH AND HUMAN SERVICES ON THE GENERAL ACCOUNTING OFFICE'S DRAFT REPORT, "HOMELESS MENTALLY ILL: PROBLEMS AND OPTIONS IN ESTIMATING NUMBERS AND TRENDS," DATED FEBRUARY 8, 1988

General Comments

The draft report is a valuable analysis of the current state of the art in a very difficult area: the accurate estimation of numbers and trends in the population of homeless mentally ill persons. The report identifies the key issues involved in making such estimates and discusses the utility and drawbacks of the various options. It is an important contribution to improving research on determining the number of homeless individuals and the number of homeless mentally ill persons. As such, it enhances the Department's ability to obtain the data needed to plan effective programs in this area. The Department has been considering ways to enhance its work in this important area as part of its research initiatives on chronic mental illness.

We do, however, have several recommendations for GAO's consideration in preparing the final report, particularly important is item number 1 below:

1. Two of the proposed options for obtaining a nationwide estimate of the number of persons who are chronically mentally ill presented in the draft report rely heavily on the use of data bases that currently exist or could be developed using existing legislative authority. The Stewart B. McKinney Homeless Assistance Act does not mandate an accounting for either the homeless or the mentally ill homeless populations. The annual reporting requirements for Title II, Section 203, of the Act only asks for descriptions of the "extent and nature" of the problems of the homeless. Also, the authorities noted above, expire on July 22, 1990, and appropriations are not authorized after Fiscal Year 1988. It is our view that the recipients of Federal funds under this program and the mental health block grant (MHBG) program do not currently have the capacity or the resources to provide accurate information on the number of severely mentally ill homeless persons in the jurisdictions which they serve. Furthermore, such a study would have to go beyond the MHBG program to include the large number of severely mentally ill persons who are in contact with other parts of the human services system.



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Similarly, not all agencies serving homeless persons are grantees under the McKinney legislation. Many of these grantees are service-oriented entities which have little or no capacity to collect reliable and valid data (including mental health status information) on the clients they serve.

See comment 1.

2. The report would be strengthened if information could be provided on the "costs" to develop better national estimates of the homeless and homeless mentally ill populations. For example, such cost estimates could be useful in evaluating the benefits of this line of research versus research on identifying successful interventions.

See comment 2.

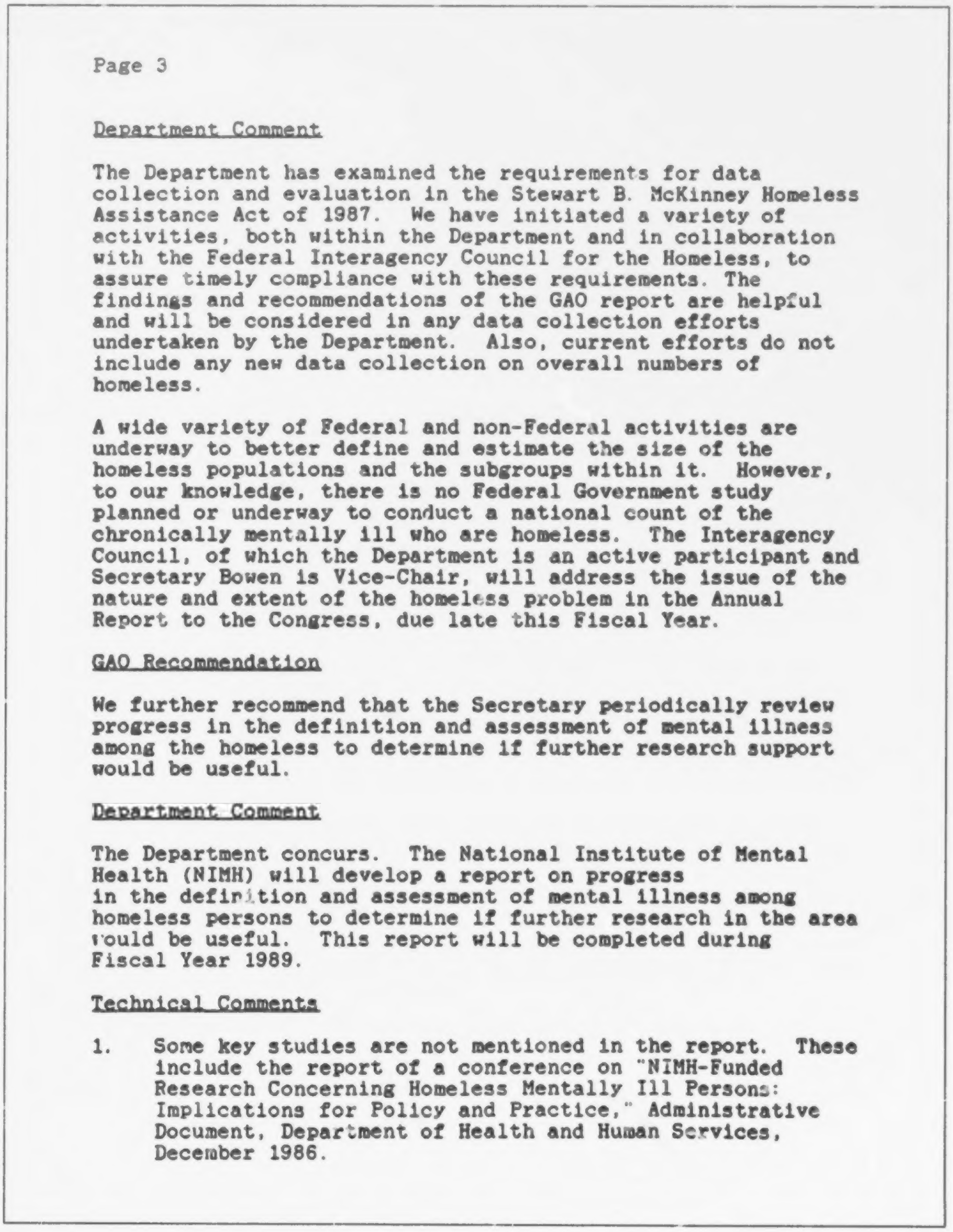
3. Parts of the report discuss the distinctions among persons with chronic mental illness, persons with an acute mental disorder, and those who are exhibiting primarily symptoms of the environmental stress (i.e., their homelessness). However, the differences among these three subpopulations of homeless persons and implications for conducting a systematic count are not addressed in sufficient detail. Clearly these groups have different needs for services and may require very different interventions.

See comment 3.

4. At a number of places in the report, proposals are made which imply that the problem of homelessness (and of the chronically mentally ill homeless) is restricted to urban areas (i.e., the discussion of two-stage probability sample of cities in Chapter IV-7). Insufficient attention is given to the homeless problem in rural areas and/or small towns.

GAO Recommendation

We recommend that the Secretary examine the requirements for data collection and evaluation in the Stewart B. McKinney Homeless Assistance Act of 1987 and direct that the methodological issues discussed in our analysis of the four options be considered as administrative data bases are established, as regulations specifying data to be collected by grantees are prepared, and as awards are made for specific data collection activities. These include such issues as a consistent definition of homelessness, specification of the area of coverage, obtaining data on a regular basis so that seasonality can be assessed, and support for studies which would permit firmer adjustments for street-to-shelter ratios.



Page 3

Department Comment

The Department has examined the requirements for data collection and evaluation in the Stewart B. McKinney Homeless Assistance Act of 1987. We have initiated a variety of activities, both within the Department and in collaboration with the Federal Interagency Council for the Homeless, to assure timely compliance with these requirements. The findings and recommendations of the GAO report are helpful and will be considered in any data collection efforts undertaken by the Department. Also, current efforts do not include any new data collection on overall numbers of homeless.

A wide variety of Federal and non-Federal activities are underway to better define and estimate the size of the homeless populations and the subgroups within it. However, to our knowledge, there is no Federal Government study planned or underway to conduct a national count of the chronically mentally ill who are homeless. The Interagency Council, of which the Department is an active participant and Secretary Bowen is Vice-Chair, will address the issue of the nature and extent of the homeless problem in the Annual Report to the Congress, due late this Fiscal Year.

GAO Recommendation

We further recommend that the Secretary periodically review progress in the definition and assessment of mental illness among the homeless to determine if further research support would be useful.

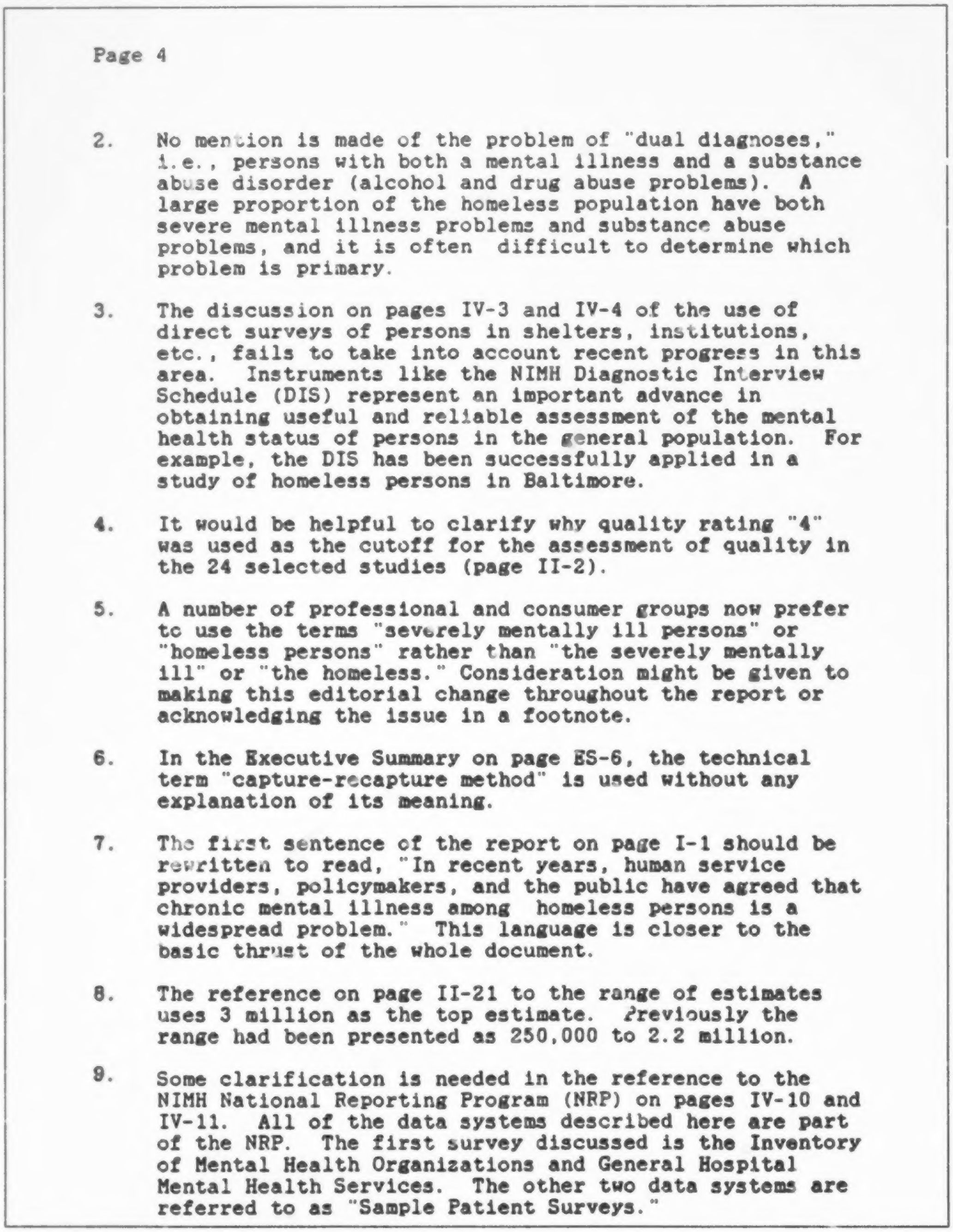
Department Comment

The Department concurs. The National Institute of Mental Health (NIMH) will develop a report on progress in the definition and assessment of mental illness among homeless persons to determine if further research in the area would be useful. This report will be completed during Fiscal Year 1989.

Technical Comments

See comment 4.

1. Some key studies are not mentioned in the report. These include the report of a conference on "NIMH-Funded Research Concerning Homeless Mentally Ill Persons: Implications for Policy and Practice," Administrative Document, Department of Health and Human Services, December 1986.



Page 4

See comment 5.

2. No mention is made of the problem of "dual diagnoses," i.e., persons with both a mental illness and a substance abuse disorder (alcohol and drug abuse problems). A large proportion of the homeless population have both severe mental illness problems and substance abuse problems, and it is often difficult to determine which problem is primary.

Now pages 39-42.
See comment 6.

3. The discussion on pages IV-3 and IV-4 of the use of direct surveys of persons in shelters, institutions, etc., fails to take into account recent progress in this area. Instruments like the NIMH Diagnostic Interview Schedule (DIS) represent an important advance in obtaining useful and reliable assessment of the mental health status of persons in the general population. For example, the DIS has been successfully applied in a study of homeless persons in Baltimore.

See comment 7.
Now page 13.

4. It would be helpful to clarify why quality rating "4" was used as the cutoff for the assessment of quality in the 24 selected studies (page II-2).

See comment 8.

5. A number of professional and consumer groups now prefer to use the terms "severely mentally ill persons" or "homeless persons" rather than "the severely mentally ill" or "the homeless." Consideration might be given to making this editorial change throughout the report or acknowledging the issue in a footnote.

See comment 9.

6. In the Executive Summary on page ES-6, the technical term "capture-recapture method" is used without any explanation of its meaning.

See comment 10.
Now page 10.

7. The first sentence of the report on page I-1 should be rewritten to read, "In recent years, human service providers, policymakers, and the public have agreed that chronic mental illness among homeless persons is a widespread problem." This language is closer to the basic thrust of the whole document.

See comment 11.
Now page 29.

8. The reference on page II-21 to the range of estimates uses 3 million as the top estimate. Previously the range had been presented as 250,000 to 2.2 million.

See comment 12.
Now pages 48-49.

9. Some clarification is needed in the reference to the NIMH National Reporting Program (NRP) on pages IV-10 and IV-11. All of the data systems described here are part of the NRP. The first survey discussed is the Inventory of Mental Health Organizations and General Hospital Mental Health Services. The other two data systems are referred to as "Sample Patient Surveys."

The following are GAO's comments on the March 25, 1988, U.S. Department of Health and Human Services letter.

GAO Comments

1. HHS suggests we present costs for each of the options. We concur and do discuss costs in appendix VIII.

2. HHS acknowledges distinguishing among persons with chronic mental illness, persons with acute mental disorder, and those who are exhibiting signs of environmental stress and suggests we provide more detail on the differences among these subpopulations and the implications of this categorization for our proposed count. We concur and have expanded our description of these three groups and discussed in more detail the measurement issues involved in identifying them. (See page 37.)

3. HHS criticizes our focus on urban areas. We have clarified that our specification of the design for a nationally representative count is provided as an illustration of how such a study might be conducted and the cost. Including small towns and rural areas would increase the costs of the study. See page 89.

4. HHS notes that some key studies were not included in our analysis. We have reviewed the studies mentioned by HHS and none of these studies met our criteria. Those mentioned by HHS represent descriptive studies of homeless mentally ill persons and not counts of that population We have summarized several studies mentioned by HHS that, while not counts of homeless chronically mentally ill persons, offer promising approaches to the assessment of mental health status.

5. HHS suggests we discuss the measurement issues associated with persons with a "dual disorder" (mental illness and substance abuse). We concur. This has been addressed in chapter 3.

6. HHS notes that we do not discuss recent developments in mental health measurement such as the diagnostic interview schedule. We acknowledge these promising developments on pages 39-42.

7. HHS suggests that we clarify the basis for distinguishing sound from unsound studies. We have developed an alternative rating protocol that characterizes studies in terms of the magnitude and direction of bias that is likely to be present.

8. HHS recommends that we refer to the target population in our study as "homeless persons." We concur and have tried to use this term consistently throughout the text.

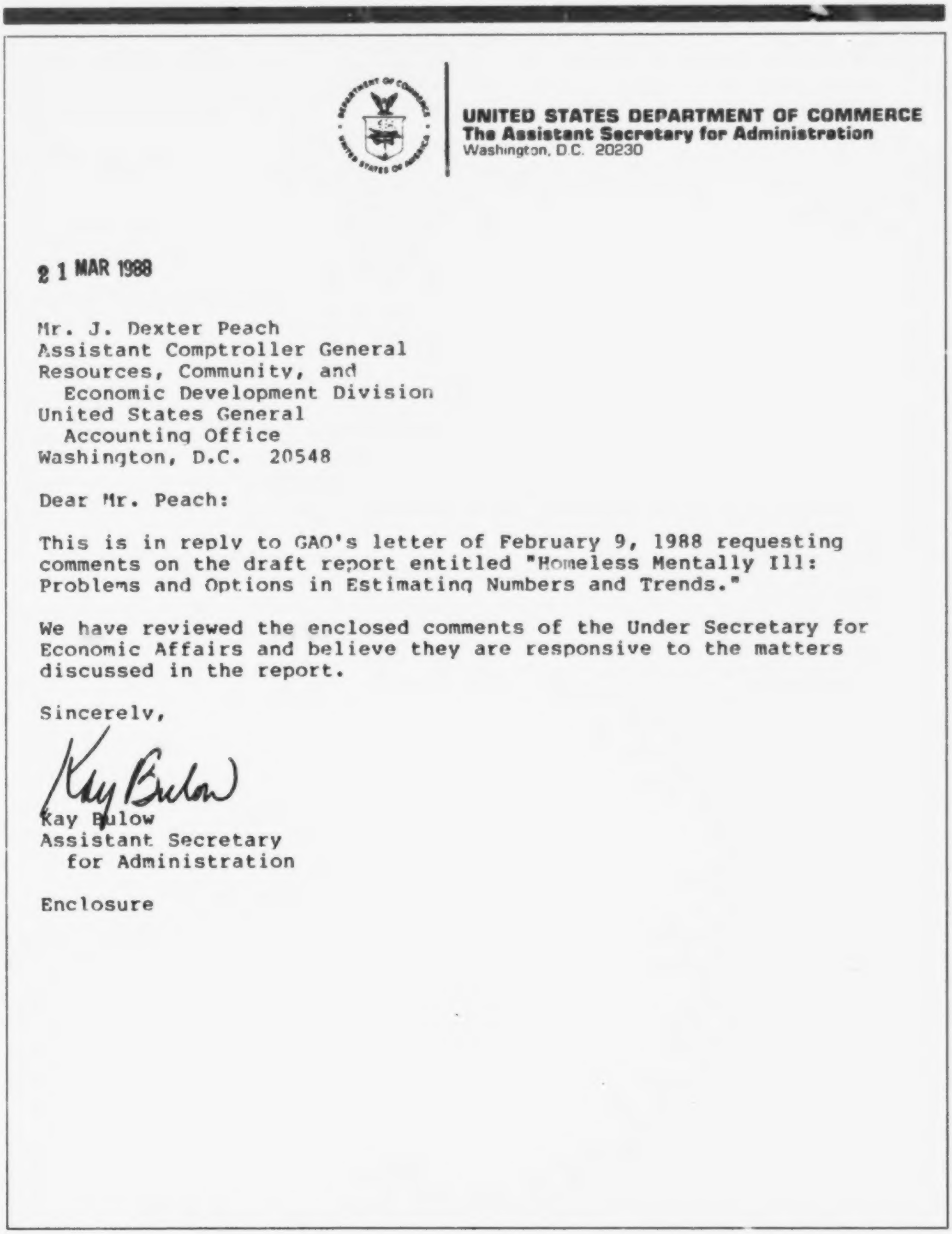
9. A clarification has been added to explain the "capture-recapture" method where the term first appears.

10. HHS recommends that we change the wording of the topic sentence on page 10 to conform to the central thrust of the report. The text has been changed.

11. The Community for Creative Non-Violence has estimated that there may be as many as 3 million homeless persons in this country. This estimate has been used where appropriate throughout the report.

12. We have clarified that all the information systems we described are part of the NIMH national reporting system.

Comments From the Department of Commerce



UNITED STATES DEPARTMENT OF COMMERCE
The Assistant Secretary for Administration
Washington, D.C. 20230

21 MAR 1988

Mr. J. Dexter Peach
Assistant Comptroller General
Resources, Community, and
Economic Development Division
United States General
Accounting Office
Washington, D.C. 20548

Dear Mr. Peach:

This is in reply to GAO's letter of February 9, 1988 requesting comments on the draft report entitled "Homeless Mentally Ill: Problems and Options in Estimating Numbers and Trends."

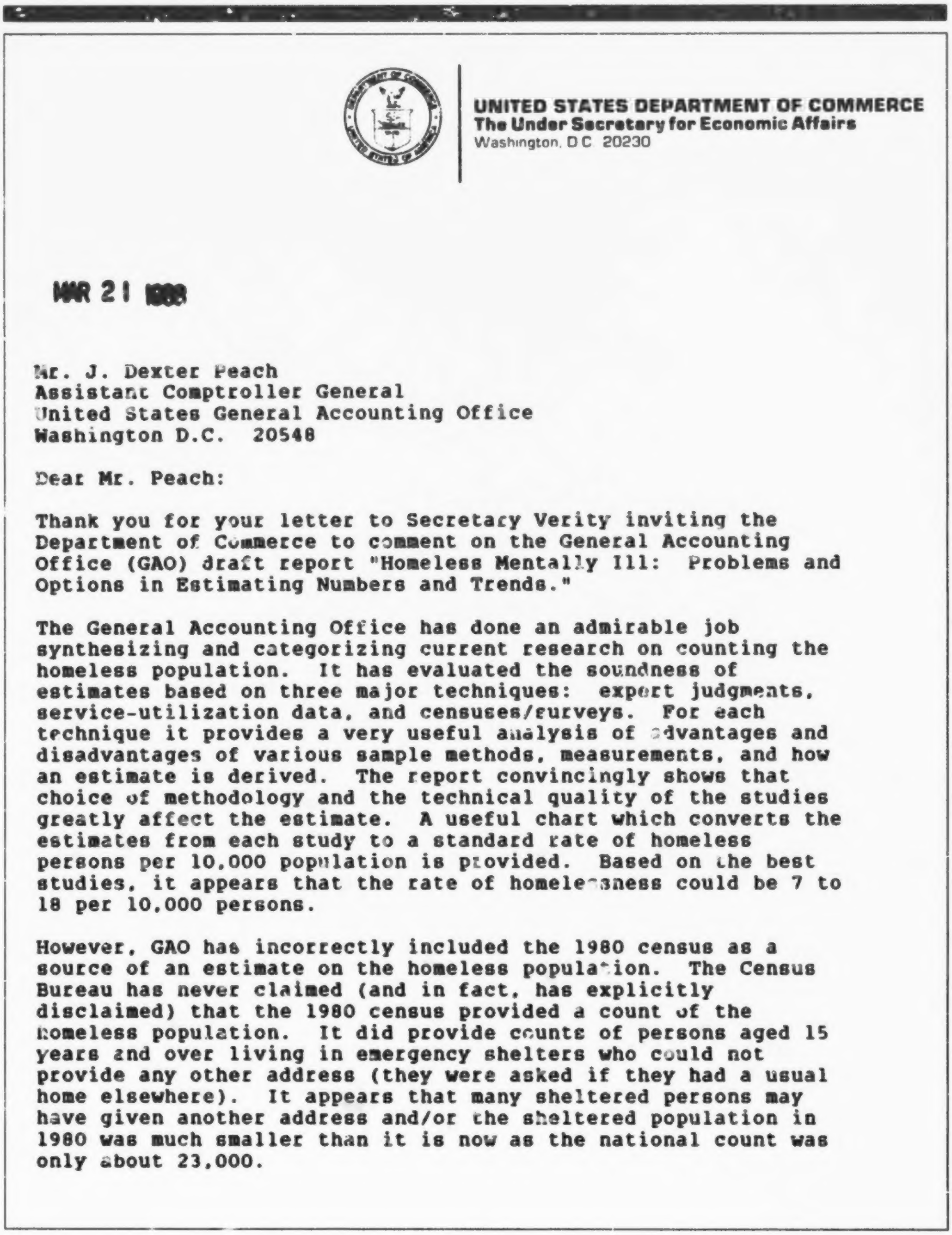
We have reviewed the enclosed comments of the Under Secretary for Economic Affairs and believe they are responsive to the matters discussed in the report.

Sincerely,

Kay Bulow

Kay Bulow
Assistant Secretary
for Administration

Enclosure



UNITED STATES DEPARTMENT OF COMMERCE
The Under Secretary for Economic Affairs
Washington, D.C. 20230

MAR 21 1988

Mr. J. Dexter Peach
Assistant Comptroller General
United States General Accounting Office
Washington D.C. 20548

Dear Mr. Peach:

Thank you for your letter to Secretary Verity inviting the Department of Commerce to comment on the General Accounting Office (GAO) draft report "Homeless Mentally Ill: Problems and Options in Estimating Numbers and Trends."

The General Accounting Office has done an admirable job synthesizing and categorizing current research on counting the homeless population. It has evaluated the soundness of estimates based on three major techniques: expert judgments, service-utilization data, and censuses/surveys. For each technique it provides a very useful analysis of advantages and disadvantages of various sample methods, measurements, and how an estimate is derived. The report convincingly shows that choice of methodology and the technical quality of the studies greatly affect the estimate. A useful chart which converts the estimates from each study to a standard rate of homeless persons per 10,000 population is provided. Based on the best studies, it appears that the rate of homelessness could be 7 to 18 per 10,000 persons.

However, GAO has incorrectly included the 1980 census as a source of an estimate on the homeless population. The Census Bureau has never claimed (and in fact, has explicitly disclaimed) that the 1980 census provided a count of the homeless population. It did provide counts of persons aged 15 years and over living in emergency shelters who could not provide any other address (they were asked if they had a usual home elsewhere). It appears that many sheltered persons may have given another address and/or the sheltered population in 1980 was much smaller than it is now as the national count was only about 23,000.

Further, street enumeration was not conducted at the time of the census. Several months after the census, in selected large central cities only, the aptly named "casual count" operation was conducted. The operation was for coverage, not for a count of the street population, although homeless persons in the street could have been included. Enumerators, during the day, asked anyone encountered if they had been counted in the census. If the person stopped by the enumerator said that they had been counted in the census, no further questions were asked. Only those who said they had not been counted were asked if they had a usual home elsewhere and only those who had no usual home elsewhere were included in the casual count. This added about 23,000 people but it is not the Census Bureau's estimate of the size of the homeless "street" population in 1980. There was no attempt to conduct a systematic, nationwide count of the homeless population living in the streets.

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In short, it is incorrect and misleading to include the 1980 census in these studies or to show the estimate of 51,000 as an estimate of the homeless population. Accordingly, the following pages should be changed to remove the reference to the 1980 census in this context: Pg. II-4; II-21 (para. 2, lines 2-3); II-22 (3rd listing from bottom); Appendix IV, page 2; Appendix VI, page 1.

We are enclosing additional technical comments. We appreciate the opportunity to comment on this report. If you have any questions or need additional information, please contact Michael S. McKay, Chief, Organization and Management Systems Division, Bureau of the Census on 763-7452.

Sincerely,

Robert Ortner
Under Secretary for
Economic Affairs

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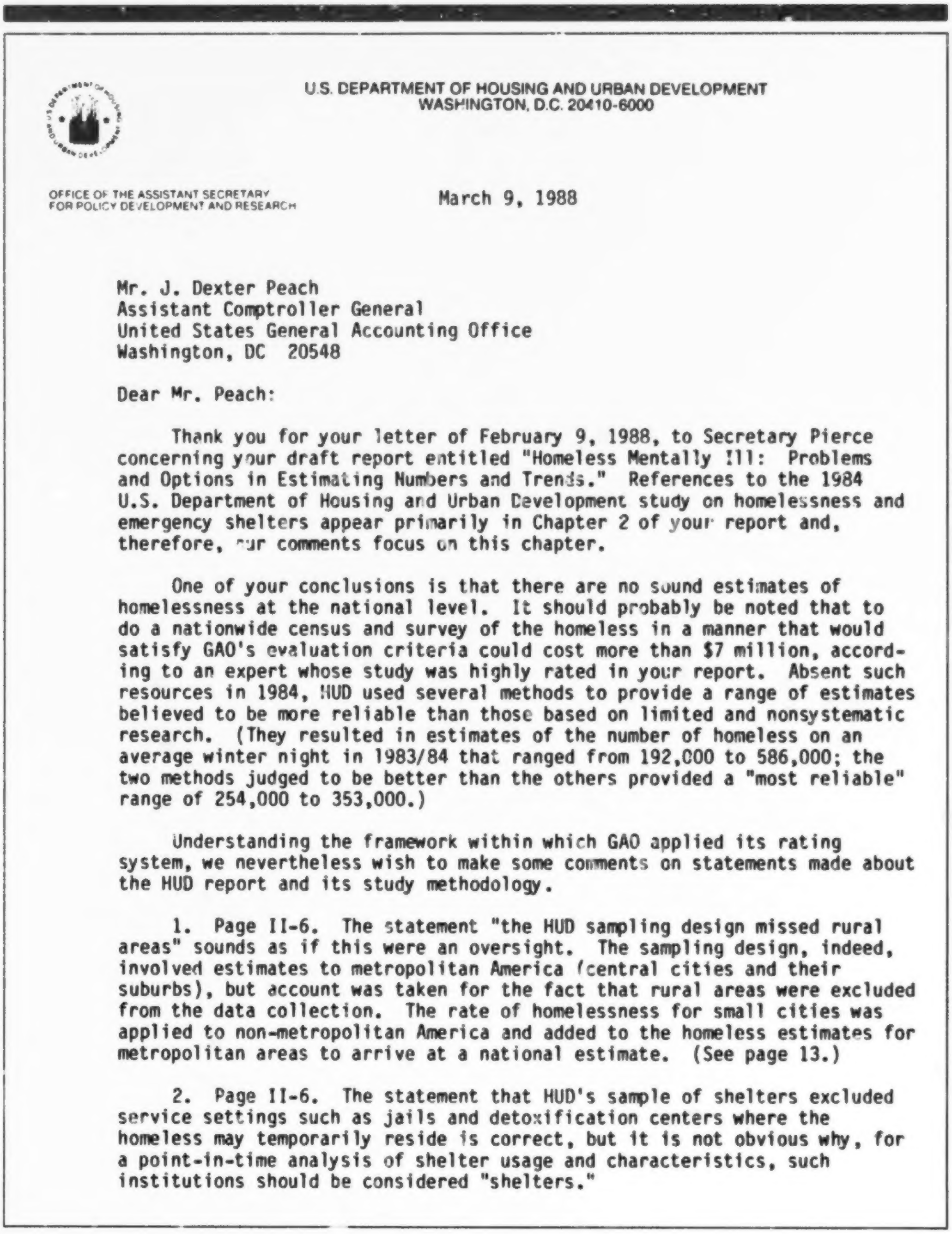
Attachments

Comments From the Department of Housing and Urban Development

Note: GAO comments supplementing those in the report text appear at the end of this appendix.



U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
WASHINGTON, D.C. 20410-6000

OFFICE OF THE ASSISTANT SECRETARY
FOR POLICY DEVELOPMENT AND RESEARCH

March 9, 1988

Mr. J. Dexter Peach
Assistant Comptroller General
United States General Accounting Office
Washington, DC 20548

Dear Mr. Peach:

Thank you for your letter of February 9, 1988, to Secretary Pierce concerning your draft report entitled "Homeless Mentally Ill: Problems and Options in Estimating Numbers and Trends." References to the 1984 U.S. Department of Housing and Urban Development study on homelessness and emergency shelters appear primarily in Chapter 2 of your report and, therefore, our comments focus on this chapter.

One of your conclusions is that there are no sound estimates of homelessness at the national level. It should probably be noted that to do a nationwide census and survey of the homeless in a manner that would satisfy GAO's evaluation criteria could cost more than $7 million, according to an expert whose study was highly rated in your report. Absent such resources in 1984, HUD used several methods to provide a range of estimates believed to be more reliable than those based on limited and nonsystematic research. (They resulted in estimates of the number of homeless on an average winter night in 1983/84 that ranged from 192,000 to 586,000; the two methods judged to be better than the others provided a "most reliable" range of 254,000 to 353,000.)

Understanding the framework within which GAO applied its rating system, we nevertheless wish to make some comments on statements made about the HUD report and its study methodology.

Now page 19.
See comment 1.

1. Page II-6. The statement "the HUD sampling design missed rural areas" sounds as if this were an oversight. The sampling design, indeed, involved estimates to metropolitan America (central cities and their suburbs), but account was taken for the fact that rural areas were excluded from the data collection. The rate of homelessness for small cities was applied to non-metropolitan America and added to the homeless estimates for metropolitan areas to arrive at a national estimate. (See page 13.)

See comment 2.

2. Page II-6. The statement that HUD's sample of shelters excluded service settings such as jails and detoxification centers where the homeless may temporarily reside is correct, but it is not obvious why, for a point-in-time analysis of shelter usage and characteristics, such institutions should be considered "shelters."

Now pages 20-21.

See comment 3.

3. Page II-7 and II-8. The statement that HUD asked respondents to estimate the number of homeless in their city is incorrect. The analysis was designed to estimate metropolitan-wide homelessness. In larger metropolitan areas, separate estimates were obtained for the central city and for the surrounding jurisdictions, and these were combined to arrive at a metropolitan-area total. Finally, metropolitan-wide estimates were obtained in more than one way, including separate surveys of shelter operators and of other experts from a wide variety of organizational settings.

Now page 20.
See comment 4.

4. Page II-8. The statement that it is unclear how the weighted individual estimates within metropolitan areas were combined to produce an estimate -- whether they were added or averaged -- is not accurate. Page 13, paragraph 3, and Appendix page A-3 describe the procedure, and indicate that weighted estimates for each city were averaged to produce a single figure.

Now page 21.
See comment 5.

5. Page II-9. If you include the statement that the number of homeless on the streets in Phoenix was incorrectly stated as 1,813, which you indicate actually represented both the sheltered and unsheltered population, you should also indicate that a recalculation of the street-to-shelter ratio analysis using this number would result in the following change: instead of the 192,000 figure for the national homeless estimate using the street-to-shelter approach, the number would be even lower at 168,000.

See comment 6.
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6. Please check footnote b on Table 2.6, which appears to be incorrect given the information presented in the table.

See comment 7.

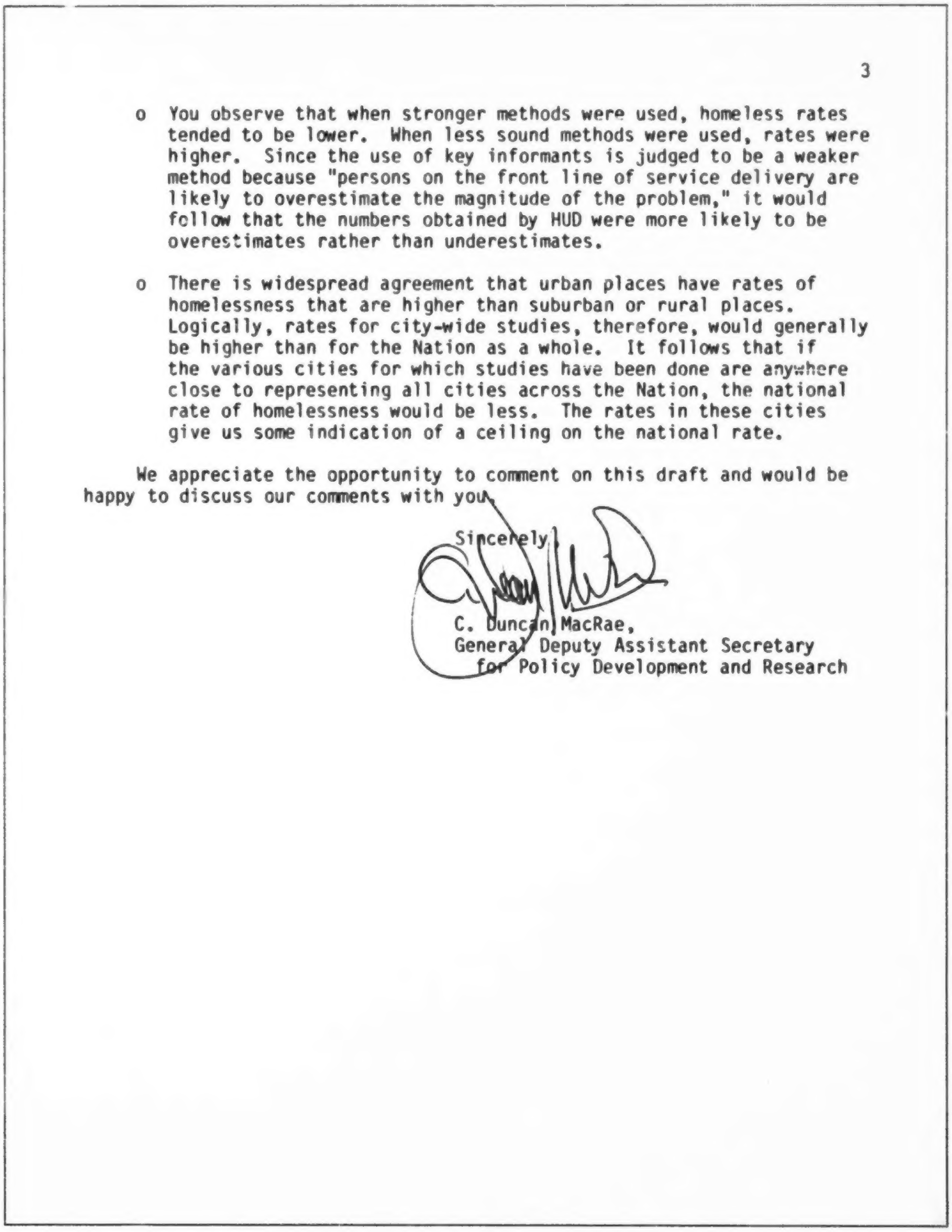
Now pages 29-31.

7. Since the incidence of homelessness is known to vary by size and type of place (higher in central cities and lower in suburban areas; higher in larger cities and lower in smaller cities), it seems inappropriate to compare national, State and local studies with respect to rates of homelessness per 10,000 population. The analysis on pages 24 and following seeks to reduce variation by eliminating studies with either high or low rates, but puts side by side studies whose rates would be expected to be different because they are for large central cities, smaller cities, States, and even the Nation.

See comment 8.

8. As you know, the controversy over the number of homeless persons in the Nation has not been settled by any study. However, some of your observations with respect to several local studies provide some significant guidance with respect to this question. Your readers may wish to consider the following:

- The two studies rated highest by GAO (Chicago and Los Angeles) have rates of homelessness that are lower than the rates HUD obtained for these specific places.



- o You observe that when stronger methods were used, homeless rates tended to be lower. When less sound methods were used, rates were higher. Since the use of key informants is judged to be a weaker method because "persons on the front line of service delivery are likely to overestimate the magnitude of the problem," it would follow that the numbers obtained by HUD were more likely to be overestimates rather than underestimates.

- o There is widespread agreement that urban places have rates of homelessness that are higher than suburban or rural places. Logically, rates for city-wide studies, therefore, would generally be higher than for the Nation as a whole. It follows that if the various cities for which studies have been done are anywhere close to representing all cities across the Nation, the national rate of homelessness would be less. The rates in these cities give us some indication of a ceiling on the national rate.

We appreciate the opportunity to comment on this draft and would be happy to discuss our comments with you.

Sincerely,

C. Duncan MacRae,
General Deputy Assistant Secretary
for Policy Development and Research

The following are GAO's comments on the March 9, 1988, U.S. Department of Housing and Urban Development letter.

GAO Comments

1. HUD expresses concern about our criticism that it did not include rural areas in its sampling design, suggesting that we note its attempt to estimate the number of rural homeless persons by using data from small metropolitan areas. Although this was noted in appendix IV of our draft report, we have added a clarification explaining how the rural homeless were estimated in HUD's procedures.

2. HUD questions why jails and detoxification centers should be considered shelters. In our view, it is not appropriate to restrict the definition of "sheltered homeless" to settings officially designated as "shelters for the homeless." Homeless persons receive similar services (food and temporary shelter) for similar lengths of time in other settings (for example, jails and detoxification centers). Not including these settings would produce an underestimate of the size of the "temporarily sheltered homeless" population.

3. HUD identifies an apparent inaccuracy in our description of the geographic unit of analysis used by respondents in estimating the size of the homeless population. We state that HUD asked respondents to make estimates for their "city" and HUD states estimates were made for metropolitan areas. However, HUD refers to estimates for each city in its report's appendix. This ambiguity in the documentation led to our use of the term "city." Even with this clarification, our concern is valid—HUD did not make clear to the respondents in the survey which specific geographic area they were asked to evaluate (that is, "metropolitan area" was not explicitly defined).

4. HUD identifies an inaccuracy in our statement about how individual estimates within a city were combined to derive an "overall estimate." We have modified the text to clarify our concern about how the weighting was carried out.

5. HUD suggested that our contention that it incorrectly stated the street count in Phoenix implies that we ought to report the implications of this error on the national homeless estimate. We concur and have added a footnote to that effect.

6. HUD is correct in noting the error in footnote b of figure 2.6 (referred to by HUD as table 2.6.) This figure has been removed from the report.

7. HUD suggests that we augment our current analysis of correlates with rates of homelessness. We concur and have discussed a more comprehensive analysis of the effects of these factors on rates of homelessness.

8. HUD's observations have been reproduced but since we do not have empirical data to assess the validity of its assertions, we cannot answer them directly. HUD's second point rests on the assumption that poorer methods are subject only to biases that overestimate homelessness. Our analysis shows that poorer studies are likely to contain numerous flaws. The variability in the estimates produced by this class of studies suggests that the combined influence of flaws may overestimate or underestimate homelessness.

Glossary

Chronically Mentally Ill	Persons experiencing severe and persistent mental disorders such as schizophrenia and major depression that interfere with their functional capacities and require prolonged professional care.
Cyclical Homeless	Persons who are rendered without residence routinely and predictably such as men whose low Social Security and high rent allow them to pay rent for 3 weeks and render them homeless the last week of each month.
Episodic Homeless	Persons who are usually homeless for a brief period because of circumstances such as the loss of a job, a house burned down, and abuse in the home.
Homeless Shelter	Temporary indoor living accommodations such as an emergency shelter, a mission, and a battered-women's home.
Incidence	The number of new cases during any specified period of time.
Literally Homeless	Persons who lack a fixed, regular, and adequate nighttime residence or whose primary residence is a shelter for the homeless, institution providing temporary residence, or a public or private place not ordinarily used for regular sleeping accommodations for humans.
Precariously Housed	Persons who live in conventional dwellings but whose connection to those domiciles is temporary or tenuous. Includes persons doubled up or tripled up with relatives or friends and often may include persons temporarily housed in institutions such as jails and hospitals.
Prevalence	The number of total cases at a specified moment in time. Prevalence is a function of incidence and duration. Duration is the time between the initial identification of a case and its termination because of death, recovery, or a change in status. See also Incidence.
Trend	A pattern of increasing or decreasing numbers of homeless for longer than a year.

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We separated our information sources into two groups: a list of the studies we screened for our information synthesis and a list of other references also related to homelessness and pertinent methodological issues.

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